# A NATURAL HISTORY OF *ENGLISH* INSECTS.

Illuſtrated with

A Hundred COPPER PLATES, curiouſly Engraven from the Life:

*And (for thoſe who deſire it) exactly Coloured by the* AUTHOR

*ELEAZAR ALBIN*, Painter.

To which are added, LARGE

# NOTES,

And many Curious

# OBSERVATIONS.

BY

W. DERHAM, Fellow of the *Royal Society.*

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To Her Royal Highness the

# PRINCESS of *WALES.*

Madam,

MY profound Veneration for Your Royal Highness's Perſon, had prevented this Preſumption; but Your readineſs in condeſcending to Patronize whatſoever may tend to the Honour of God, [whoſe infinite Power is no leſs viſible in the

Smalleſt of his Works, than in thoſe of the Largeſt Magnitude] or the Good of Mankind, Encouraged me to offer the following Work at Your ROYAL FEET, moſt Humbly begging Your Pardon and Protection; who am, may it pleaſe Your ROYAL HIGHNESS, with the greateſt Duty,

*Your* ROYAL HIGHNESS's

*Moſt Faithful, and*

*Moſt Obedient,*

*Humble Servant,*

ELEAZAR ALBIN.

# PREFACE.

TEACHING to Draw, and Paint in Water-Colours, being my Profeſſion, firſt led me to the obſerving of *Flowers* and *Inſects*, with whoſe various Forms and beautiful Colours I was very much delighted, eſpecially of the latter, ſeveral of which I painted after the Life, for my own Pleaſure: After ſome time this brought me acquainted with Mr. *Dandridge*, a very ingenious Man, and very curious in obſerving the Works of Nature: He had diverted himſelf ſome Years with collecting *Inſects*, and obſerving their ſeveral Progreſſions from the *Egg*, thro' their *Worm*-State, to the *Fly*, which is their State of Perfection; this curious Perſon employed me in painting *Caterpillars* for him, and recommended me to Mrs. *How*, Widow of the late famous Phyſician of that Name: For this curious Lady I painted a great Number of both *Caterpillars* and *Flies*, and likewiſe ſeveral Things relating to Natural Hiſtory for Sir *Hans Sloane*: After this I was introduc'd to Her Grace *Mary* the late Dutcheſs Dowager of *Beaufort*, who imployed me in the ſame manner; this excellent Lady firſt perſwaded me to undertake the following Work, and encouraged me by procuring me Subſcriptions from ſeveral Perſons of the firſt Quality: While this good Lady lived it went on apace, and I am perſuaded had been finiſhed long ſince if it had pleaſed God to have ſpared her; but after the loſs of my Patroneſs, Subſcriptions coming in ſlowly, and my Circumſtances (having a great Family to provide for) not being able to carry it on without, retarded it. Theſe Conſiderations I hope will diſpoſe thoſe honourable and worthy Perſons who ſubſcribed early to pardon me that they have expected it ſo long.

Thus

Thus much I thought proper to ſay concerning what put me upon this Undertaking, and likewiſe to acquaint the World with the Reaſons why it has been ſo long in hand: I ſhall now ſay ſomewhat of the Work it ſelf.

In the firſt place, in all my Drawings, particularly of the *Inſects*, I have copied exactly after the Life; having obſerved it as a great Fault in thoſe who have gone before me in this Way, that they either did not look often enough at their Pattern, or affected to make the Picture outdo Nature: This I have carefully avoided. So likewiſe in my Deſcriptions, I have choſen the plaineſt Words that I could find, and have always related with all poſſible exactneſs meer Fact; leaving it to Perſons of more Learning, and greater Capacity, to cultivate this Part of Natural Hiſtory; which I am perſwaded may be improved to the Glory of our great Creator, and very much conduce to the Benefit of Mankind.

Thro' the whole Courſe of my Obſervations, I have not met with one Inſtance, that gave me Reaſon to doubt of *Inſects*, in general, being produced by Animal Parents of the ſame Species. In this I am confirmed by the curious Experiments and Obſervations of *Franciſco Redi*, an ingenious *Italian*, who writ a Treatiſe on this Subject: Tho' I cannot help admiring how ſo exact an Obſerver of Nature could be led into ſo great a Miſtake, as to think that ſome *Inſects* were the Product of thoſe Vegetables in whoſe Excreſcences they had been nurs'd up; ſince it will be evident to any one who will take the Trouble carefully to examine it, that a *Fly*'s piercing the outer Skin, or Bark of a Plant, and laying her *Egg* within it, ſo alters the Texture of the *wounded* Veſſels, that the Sap paſſing thro' them forms the Excreſcence; which ſerves not only as a convenient Matrix, or Neſt, but likewiſe affords proper Nouriſhment to the *Worm*, when it is hatched,

hatched, while it continues in that State; and proves a Security to it while in its *aurelia*-State, 'till it becomes a *Fly*; which then makes its way thro' it, tho' never ſo thick: which is very much to be admired, conſidering the Smallneſs of ſome of theſe *Flys*, and the Thickneſs and Solidity of the Excreſcences they are bred in. This is eaſily obſerved in the common Gall, in which, if there is no hole, you will certainly find a dead *Inſect*, either a ſtarved *Worm* or *Fly*, according to the State it was in, when the Gall was gathered; but if there is a hole, the *Fly* had acquir'd its Perfection and is gone.

No one, who is at all converſant in theſe Inquiries, can avoid admiring, and adoring the infinite Goodneſs of God, who in his Providence has given an Inſtinct to all his animal Creatures, even of the loweſt Order, ſufficient to direct them in all Things neceſſary for their own Preſervation, and Propagation of their Kind: To this end they do not lay their *Eggs* looſely, ſo as to be driven from Place to Place, (much leſs from Country to Country) by the Winds; but fix them on *Plants* or *Inſects*, &c. which will be proper Food for their *Worms*, while in their growing State; and thoſe that are laid only ſuperficially on Plants, are faſtned by a Glew, ſo tenacious that the Rains can't waſh them off: And as for thoſe that are laid contiguous, they are not laid in a heap, but in exact Order, and ſo diſpoſed, that one may not hinder the *Worm* of the others from coming forth: And what is very remarkable in ſome of them, a determined Side, or End, is always placed outward.

Some few of the *Moth* Kind I have obſerved to ſcatter their *Eggs* with a ſeeming Careleſsneſs as they fly; theſe are rarely ſeen but in Meadows, and the Food of their *Caterpillars*, being generally *Graſs*, is more obvious than that of thoſe which affect particular Plants: And if I may judge of the Number of their *Eggs*, by

by the Size of them, in Proportion to the Bigneſs of the *Fly*, it is likely they lay three or four times the Number of *Eggs* that others do, who place them with more Care; ſo that there is abundant Proviſion made for thoſe Accidents which may befall them. It would be almoſt endleſs to mention thoſe Obſervations only, that fall in every one's Way, who has made any conſiderable Progreſs in theſe Matters.

As Providence is ſo remarkable in the Propagation and Preſervation of *Inſects*, ſo are they by no means to be eſteem'd uſeleſs Creatures: for beſides their Subſerviency to one another, they likewiſe ſerve as Food to many other Creatures, both *Fiſh* and *Fowls*; young *Birds* are almoſt generally fed with them; and for that End, it is obſervable that they are to be found in greateſt Plenty in the *Spring*, which is the breeding Seaſon for moſt of the Volatile Kind. By this Means they become ſerviceable to Mankind. Nor do they ſerve us only ſecondarily, but we are indebted to them for Relief in ſeveral Diſeaſes; for all our *Honey*, *Wax*, *Silk*, Beſt *Scarlet*, &c. But as theſe Things fall under every one's View, I ſhall paſs them by, with only mentioning, to recommend to your Notice their infinite Variety, in Shape, Texture, Colours, and the exact Uniformity that is always preſerved in each Species; that you can't ſee a Spot that is remarkable, but it is found in all of the ſame Kind; and that the Colours, particularly of the *Moths* and *Butterflys* (which to our Eyes ſeem as Duſt) if they be examined by a *Microſcope*, every Particle of them is a perfect Feather, and is placed in the Wing in moſt exact Order. From the whole we cannot but conclude that they are the Work of Infinite Power, and not the Effect of meer Chance, or the Product of Corruption.

THE

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# TO
# HER ROYAL HIGHNESS
## THE
# PRINCESS OF *WALES.*

*Moſt Illuſtrious Madam,*

THE great Benefits which I have received, not only from the Prince, but alſo from Your Royal Highneſs, oblige me to take all Opportunities of ſhewing my ſincere Thankfulneſs for the ſame; and having nothing at preſent better to offer, I have preſumed (having the Favour of Your Leave) to lay theſe *Notes* at Your Feet; hoping they will not be unacceptable to Your Royal Highneſs, by reaſon they are Obſervations of ſuch Matters, as I have the Honour to know You are pleaſed with the Contemplation of, and have a great Knowledge of, I mean the Works of the Creation; a beautiful and curious Part of which the *Inſect-Tribe* is, as well as other of the more magnificent and admired Works: All which Works, as they are manifeſt Demonſtrations of the Infinite Power, Wiſdom, and Goodneſs of the Great Creator and Contriver of them; ſo with great Pleaſure and Satisfaction have I been an happy Witneſs of Your Royal Highneſs's Juſt and Pious Reflexions upon, and Celebration of the great Author's Praiſes, from Your View and Conſideration of them.

THAT the ſame Infinite Being You ſo juſtly admire and religiouſly adore, may take You and Your Illuſtrious Family under His perpetual Care and Benediction, is the daily Prayer of,

*May it pleaſe Your Royal Highneſs,*

*Your Moſt Thankful, and*

*Obedient Humble Servant;*

W. DERHAM.

# TO THE
# READER.

*BEFORE the Doctrine of* Equivocal Generation *was exploded, the* Tribe of Insects *was look'd upon as a mean and contemptible Part of the Creation, or indeed scarce a Part thereof; but the Product of Putrefaction and* Heat. *An Opinion as monstrous, as that Atheistical Notion of* Chance. *But, if we consider the Elegance and Beauty of the Colours that adorn some of this Tribe; the Structure of the Bodies of them all nicely adapted to their Way of Life; the different States of their Generation, and what indulgent and exact Preparations are made for their Sustentation and Preservation in each of these States, with Multitudes of other Things observable in the* Insect-Tribe; *I say, if we consider these Things, we cannot but discern the Contrivance and Workmanship of an Infinitely Wise and Beneficent Being. And Mr.* Albin *having taken great Pains in these Matters, and his Draughts exceeding most that are Extant, and his Descriptions and Observations of their Generation being faithful, I thought it worth the Expence of some of my leisure Hours, (at the Request of some of my Friends) to give an Account of my own and others Observations, upon such of Mr.* Albin's Species, *as fell under my Own, or their Notice: Which Province I was the more willing to undertake, to encourage and promote the Researches of the Curious in this Part of the Creation, which is one of the least known of any that is familiarly conversed with.*

Mr.

# Mr. *DERHAM*'s NOTES ON Mr. *ALBIN*'s HISTORY OF *ENGLISH* INSECTS.

## *In the Description of* PLATE I.

*LIN* 8. After *Month*, Note 1. *Goedartius* takes Notice, That this *Butterfly* hath two Seasons for its Transformation; that if it lays its Eggs in the Summer Time, its Changes are soon effected; but if in the Autumn, it continues in the same State till the following Summer.

*Lin.* 11. After *called*, Note 2. Mr. *Petiver* calls it by this Name; or, *The Greater White Cabbage* Butterfly. *Musæum*, N° 825. Mr. *Ray* calls it *Papilio Brassicaria major vulgatissima*, Histor. Insect. *p.* 113.

*Lin.* 17. After *Nine-pin*, Note 3. And the same Make have all the Tribe of *Butterflies* and *Moths*; and not only they, but all or most other *Flying Insects*; so that it is easy to distinguish, by these Means, the *Male* from the *Female*.

*Lin.* 24. After *Sides*, Note 4. *Goedartius* makes this Sort of Generation a very strange Thing; *Mira* (saith he) *imo vix credibilia, aut antè audita, expertus sum.* But a careful Observer may meet with frequent Instances of this Production in the Bodies of *Caterpillers* and their *Aureliæ*. Of which Mr. *Albin* hath taken Notice of divers in these following Tables, some of one Sort of *Flies*, some of another; but most of them are of some or other of the *Ichneumon Fly-kind*. Of whose Generation I have taken particular Notice, in my *Physico-Theolog.* Book VIII. Where I have shown what a great Variety of Subjects these *Ichneumons* make use of to reposit their Eggs; what a commodious Apparatus they have for this Service, and what a Power they have to make even Nature itself to be Assistant to their Generation.

## Plate II.

*Lin.* 11. After *Veins*, Note 1. Mr. *Ray* calls it, *Papilio alba nervis alarum nigris, Braſſicariæ majoris figurâ & magnitudine.* And ſaith, *His notis ab omnibus nobis cognitis facilè diſtinguitur*, Hiſt. Inſect. *p.* 115.

*Lin.* 21. After *Branch*, Note 2. *Mouſet* ſaith, *Ex Chryſalide oritur auro illita.*

*Lin.* 23. After *Butterfly*, Note 3. This *Butterfly* Mr. *Ray* calls, *Papilio præcox ſulphurea, ſive flavo-viridis, ſingulis alis ſingulis maculis ferrugineis notatis*; and Mr. *Petiver*, *Papilio ſulphurea.* The Wings of this *Butterfly*, if carefully view'd, have many ſmall reddiſh Spots ſprinkled on the outer Edge of the Wings, eſpecially on their under Side. Mr. *Petiver* caught the Male and Female in their *Coit*, and obſerved the Male to be of a paler Yellow, and calls it *Papilio ſulphurea pallida.*

## Plate III.

*Lin.* 13. After *Leaves*, Note 1. *Goedartius* takes Notice, That this and other *Caterpillers*, before their Change, purge themſelves. Upon which Dr. *Liſter* obſerves, That the *Caterpiller-State* ſerving to enable the Animal to live upon a different Food, which in the *Butterfly-State* it cannot eat, therefore it is altogether agreeable to Reaſon, that the *Caterpiller* ſhould empty itſelf of all its old Food, before it betakes itſelf to another Diet. And more than all this, he is of Opinion, That the *Metamorphoſis* of a *Caterpiller* is not barely ſuperficial, but made throughout the other Parts alſo; as of the Guts, as well as Mouth, and outer Parts.

*Lin.* 16. After *called*, Note 2. Came a moſt beautiful *Butterfly*, called by Mr. *Ray*, *Papilio major Nigricans, alis Maculis rubris & albis pulchrè illuſtratis*; by Mr. *Petiver*, *Papilio major nigreſcens tricolor, circulo fere ſanguineo ornata.* Muſæum. *N°* 327. Or the *Admiral.*

## Plate IV.

*Lin.* 4. After *Brown*, Note 1. This *Caterpiller* is well deſcribed by Mr. *Ray*, in his *Hiſt. Inſect. p.* 347. N° 17 and 123, where it is called *Eruca major nigra, guttulis albis irrorata, & ſpinulis nigris per totum corpus obſita.*

*Lin.* 11. After *Liquor*, Note 2. *Goedartius* ſaith, That when the *Butterfly* firſt came forth of its *Aurelia*, its Wings were like Wet-Paper, and that ſome watry Drops fell from them; but that in half an Hour they expanded, became dry, and were fit for Flight. And in all Probability, the Drops, which Mr. *Albin* takes Notice of here, to fall from the Mouth of the *Caterpiller*, are of the ſame Nature, and for the ſame Uſe. And ſuch a watry Subſtance I having obſerv'd, with its great and neceſſary Uſe in the *Papilionaceous* Tribe, imagine it to be found in all, both the Diurnal and Nocturnal Kinds. The Uſe of which is for the Expanſion of the Wings; which when moiſtened with this Juice, will be expanded in half an Hour; but will never be completely opened, but continue ruffled up, if they are deprived of this Liquor.

*Lin.* 18. After *Caterpiller*, Note 3. Mr. *Ray* deſcribes this *Caterpiller* under the Name of *Eruca nigra, ſeu pulla ſetigera Urticaria.* *Mouſet* ſaith, That the Briſtles

of

of this *Caterpiller* wound with a ſmall Touch, which at firſt excites a pleaſant Itching, but ſoon after a venemous, and at laſt a Pain ſcarce to be endured; and that ſome affirm the Miſchief hereof to ſurpaſs that of the *Pityocampæ* (which is a venemous *Eruca* bred in the Pine, mention'd by *Pliny* and *Dioſcorides*, for its venemous Bite.) *Goedart* calls it *Helluo*, from its Voracity.

*Lin.* 27. After *Animal*, Note 4. Mr. *Ray* calls this *Butterfly*, *Papilio Urticaria vulgatiſſima, rufo, nigro, cæruleo, & albo coloribus varia.* And obſerves, That the Male hath only two white Spots in its Wings, that is, one in each Wing, near the extreme Point of the Wing; and that the reſt of the Spots in the anterior Edges of the upper Wings (intermix'd with the black ones) are in the Male yellow, but in the Female white.

## Plate. V.

*Lin. ult.* After *Author*, Note 1. Mr. *Petiver* hath figured this Moth in his *Gazophylacium Naturæ & Artis*, Tab. II. *N°* 11. who calls it, *Papilio minor ſupernè fuſca, infernè viridis.* He thinks it ſomewhat rare.

## Plate. VI.

*Lin. ult.* After *Author*, Note 1. *Merion* hath both this *Caterpiller* and *Moth*, *Tab.* XXV.

## Plate VII.

*Lin.* 5. After *Black*, Note 1. *Goedartius* thinks this Horn is poiſonous; with which it defends itſelf, when any thing toucheth it, by ſtriking with the hinder Part of its Body. And in the ſame Manner moſt of the aculeated *Caterpillers* endeavour to defend themſelves when any thing annoys them.

*Lin.* 10. After *Chryſalis*, Note 2. Moſt, if not all *Caterpillers*, when they firſt come out of their Eggs, are very ſmall; but by their Feeding, grow larger and larger: For which Reaſon, it is neceſſary they ſhould change their Skin divers times, as Mr. *Albin* here obſerves. The Mechaniſm of which I have obſerv'd is this; That the Skin of ſuch Animals as change their Skin, being not of a lax, ſtretching Texture, but compact and cloſe, becomes therefore too ſtrait and unfit for the Body, as the Animal grows in Bigneſs: And by the gradual Increment of the Body, is as gradually looſen'd from the Body, by reaſon it is not capable of being extended as the Body is. And ſo very exact this Shifting of the Skin is, that not the chief Parts and Members of the Body alone are denudated, but alſo the very *Antennæ*, yea every Hair or Briſtle in thoſe that are hairy: And in this Change of their Skin, thoſe Agitations of the *Caterpiller* are remarkable, ſpoken of in *Plate* LV. *Note* 1.

*Lin.* 19. After *Perfection*, Note 3. I preſume that the *Moth* that laid theſe ſixty Eggs, was not one that Mr. *Albin* had hatch'd, unleſs it had the Company of the Male. For all ſuch Eggs as were laid by any of the *Papilionaceous* Tribe, without the *Coit* of the Male, I have obſerv'd (as far as I could take Notice of it) to be effete, grow dry, and come to nothing; altho' indeed *Goedart*, N° 78, 86. tells an odd Story of a monſtrous Generation, in which an unuſual Animal came out of a *Caterpiller*, and

at the Time of its Death laid many live Maggots. This Dr. *Liſter* noteth to be very odd, and ſaith that he kept a *Butterfly* in a Box, which laid Eggs that produced Young. But he doubts whether it had not aſſociated with the Male; and no doubt but it had done ſo, and thät *Goedart*'s Animal had been Fly-blown by ſome *Ichneumon* or other *Fly*, which he took no Notice of. But of this ſee more in *Tables* LXXXIX, XC.

*Lin.* 21. After *Ichneumon*, Note 4. There is a great Variety of the *Ichneumon-Flies*; but this here figured is of the largeſt Sort, and is frequent in the Summer Months about green Hedges, dry Banks, and other Places, friſking its Wings and Tail by way of Ovation, or, as if pleaſed, with Fruition or Expectation. And as the whole Tribe of *Ichneumon-Flies* are extremely venemous, and will make uſe of every Thing that can be a convenient Matrix for the Hatching its Eggs; ſo in all Probability this *Friſking* is a Venereal Act. Concerning the Generation of many of the Species of the *Ichneumon-Flies*, the Diſtinction of their Sexes, Parts of Generation, *&c.* the Reader may, if he pleaſes, conſult my *Phyſico-Theol.* Book VIII. *Chap.* 6.

## Plate VIII.

*Lin.* 4. After *Tail*, Note 1. This Horn, *Goedartius* ſaith, is venemous, (like that in the preceding State) and that the *Caterpiller* defends itſelf with it, by a quick round-about Agitation every Way, endeavouring to ſtrike with its Horn whatſoever offends it.

*Lin.* 29. After *Eſcape*, Note 2. *Mouſet* calls theſe *Caterpillers*, *Lactucariæ*, becauſe he found them delighted with Lettuce. *Goedartius* ſaith, That theſe *Caterpillers* are Male and Female; that the Females are leſs beautiful, and want the round Spots, which are like Eyes. In all Probability then, theſe two *Caterpillers* here deſcribed by Mr. *Albin*, were *Male* and *Female*.

## Plate IX.

*Lin.* 6. After *Caterpiller*, Note 1. There are ſeveral Things taken Notice of by *Goedartius* concerning this *Caterpiller*, *viz.* That it can turn about its *Proboſcis*, or tapering ſharp Head, with great Agility and Quickneſs every Way, up and down this Way and that Way, as the Elephant doth his *Proboſcis*; whence he gives it the Name of the *Elephant*. That when it hath eaten its Food, it draws and hides its Head within its Body, as Tortoiſes do. That it is very timorous, and whenever the leaſt touch'd, that it ſeems ſo aſtoniſh'd, and trembles in ſuch manner, as to excite the like Paſſions in thoſe that behold it. That it is extremely quick of Hearing, and is affrighted at the leaſt Noiſe, and contracts itſelf immediately. And whereas Mr. *Albin* obſerv'd them to make their Caſe to lie in, by ſpinning it with Ladies Bed-ſtraw, *Goedart* makes it ſomewhat more artificial; namely, That it joined Bits of Wood, and Vine-Leaves together, with a Glue that was in its Mouth, (no doubt the ſame with which it ſpun, or join'd the Ladies Bed-ſtraw together) and therein lay from *September* to the 16*th* of *April* following: And whenever he touch'd it (lying in its Caſe) he found it as cold as Ice, notwithſtanding the ſtrong

ſtrong Motion of its Body at that Time. *Goedartius* thinks it worth Obſervation, that this Animal could live from *September* 4. to *April* 16. without any Food; and judiciouſly enough reſolves it into their Reſt, their Coldneſs of Conſtitution, and the Tenacity and Viſcidity of their Blood: By which Means, as there is no Waſte or Decay, ſo there needs no Recruit of the Body; and this is the Caſe of many Animals. Of which the Reader may conſult my *Phyſ. Theol.* Book IV. *Chap.* 11.

## Plate X.

LIN. 20. After *Tab.* VII. Note 1. See the Notes on *Tab.* VII.

## Plate XI.

LIN. 1. After *Caterpiller*, Note 1. *Aldrovand* hath pretty well deſcribed this *Caterpiller*, altho' with ſome little Difference, in *Lib.* II. *de Inſect.* c. 4. Mr. *Ray* deſcribes it under the Name of *Eruca bicauda elegantiſſima.*

*Lin.* 23. After *Auguſt*, Note 2. *Goedartius* ſays, that as ſoon as this *Caterpiller* hath finiſh'd its Day's Eating, it then draws its Head into its Body, (as the *Tortoiſe* doth) and there hides it, to prevent its being injur'd by the cold Air of the Night, or by Rain.

*Lin.* 25. After *Matter*, Note 3. This glutinous Matter makes their Caſe ſo hard, that altho' made of comminuted Fir, or Willow, yet is it of ſo great an Hardneſs, that it is ſcarce capable of being cut with a Knife; as *Goedart* takes Notice of, and I myſelf have alſo obſerv'd.

*Lin.* 43. After *Moth*, Note 4. The *Moth* he calls, *Phalæna major pulcherrima, alis amplis, exterioribus cinereis maculis aut lineis nigris eleganter depictis.*

## Plate XII.

LIN. 31. After *Caſes*, Note 1. *Aldrovand* ſpeaks of ſome Silk-Worms Caſes, that are as big as a Man's Head; and hath given a Figure of one ſent him by the *Great Duke of* Tuſcany, as big as a Man's Fiſt, Vid. *Aldrov. de Inſect. Lib.* II. *Cap.* 6. and *Paralip.* p. 762.

## Plate XIII.

LIN. 13. After *Caterpiller*, Note 1. Mr. *Ray* deſcribes this *Caterpiller* under the Name of *Eruca verbaſcum depaſcens cinerea pulchrè variegata.*

*Lin.* 24. After *Moth*, Note 2. The *Moth* Mr. *Ray* calls *Phalæna media, alis exterioribus cinereis, lineis & maculis nigris variè depictis, Tapſi Barbati.*

*Lin.* 27. After *m.* Note 3. As it is before ſhown, that the *Ichneumon-Flies* are very greedy of laying their Eggs in *Caterpillers*; ſo many others have the ſame Propenſity alſo; particularly *Fleſh-Flies*; of which Sort this *Fly* in the *Table* is. And as the ſmooth *Caterpillers*, or ſuch as have but a thin Armature of Briſtles, are the moſt expoſed to the Luſt of thoſe *Flies*, ſo they are what are the moſt commonly *Fly-Blown.*

## Plate XVII.

*Lin.* 5. After *Graſs*, Note 1. This *Caterpiller*, *Goedartius* ſaith, he obſerv'd to be ſleepy in the Day-time, and always at Reſt; but in the Night to be brisk, and in perpetual Motion.

## Plate XX.

*Lin.* 1. After *Caterpillers*, Note 1. Mr. *Ray* deſcribes this *Caterpiller* under the Name of *Eruca denſiùs piloſa magna, pilis longiſſimis incanis, fulvis & nigris varia, cum punctorum albentium lineis annularibus*, Hiſt. Inſect. *p.* 152.

*Lin.* 5. After *it*, Note 2. If this be *Goedart's* 99th, it not only rolls itſelf up, but erects its Briſtles as the Hedge-Hog doth; and lies ſo ſtill, that it ſuffers its Briſtles to be pull'd off, rather than it will ſtir. He takes Notice alſo, That Sparrows and other Birds will not eat them, but rather abhorr them, which hath cauſed ſome to think they are poiſonous to thoſe Birds: But in all Probability, it may be the Stiffneſs and Roughneſs of the Briſtles, that cauſeth this Abhorrence.

*Lin.* 13. After *Moth*, Note 3. Mr. *Ray* calls this *Moth*, *Phalæna major, alis amplis oblongis, albicante & fuſco coloribus pulchrè variegatis, interioribus rutilis cum maculis nigris*, Hiſt. Inſect. *p.* 151.

## Plate XXI.

*Lin.* 10. After *Moth*, Note 1. This *Moth* is that which Mr. *Petiver* hath figured in his *Gazophylacium Naturæ & Artis*, Tab. XXXIII, *xii.* under the Name of *Phalæna nigreſcens maculis majoribus ſubtùs flaveſcens*: Or, *The Yellow Royal Leopard.*

## Plate XXII.

*Lin.* 24. After *Web*, Note 1. The Hair of this Sort of *Caterpillers* is of great Uſe to them, both as a Guard againſt voracious Birds, and other Animals; as alſo in the Making their Caſes or Webs. Of which ſee *Tab.* LXXXIII.

## Plate XXIII.

*Lin.* 11. After *Moth*, Note 1. Mr. *Ray* deſcribes this *Moth* under the Name of *Phalæna media, antennis tenuibus, capite, facie, & oculis Noctuæ, fulvis, alis oblongis ex rufo cinereo, fulvo & albicante variis*, Hiſt. Inſect. *p.* 162.

## Plate XXIV.

*Lin.* 8. After *following*, Note 1. *Goedartius* very judiciouſly and truly obſerves, that this *Caterpiller, Defectu alimenti ad quietem & tranſmutationem ſe componit,* & 24 Septembris *mutari cœpit; ſed quia jam autumnale frigus appropinquabat, & Flores quibus paſci ſolent Papiliones, deficiebant, manſit in tranſmutatione ac quiete ſua uſque ad* 13 Junii *ſequentis anni.* And for theſe two Reaſons moſt of the *Papilionaceous* Tribe do, in good Seaſon, betake themſelves to their *Aurelia-State, viz.* When the Vegetables (in which they delight) either fail, or become dry, and unfit for their Food;

Food; or elſe when the Winter-Cold approaches, which few Inſects can bear. And an admirable Proviſion this is for the Preſervation and Safety of theſe Creatures: Concerning which, the Reader may conſult *Phyſico-Theol.* Book VIII. *Chap.* 5.

*Lin.* 28. After *Diſſembler*, Note 2. *Goedart* ſaith, *Eruca hæc admodum meticuloſa, ideoque ad ſimulationem prona. Simulac enim attingitur, corpus ſuum arctè in orbem convolvit, immotaque manet, inſtar mortuæ, etiamſi de loco in locum toto corpore verſetur & agitetur; ſed ſi vehementiùs prematur, ſimulare ampliùs non poteſt, ſed Hypocriſin ſuam prodens variis modis commovetur, ut effugiat*, Liſter's Goedart, *N°* 96. Mr. *Ray* deſcribes this *Caterpiller* under the Name of *Eruca hirſuta, mediæ magnitudinis, nigra, cum linea in medio dorſo rubra*, Hiſt. Inſect. *p.* 346.

## Plate XXV.

*Lin.* 1. After *Caterpiller*, Note 1. Theſe *Caterpillers* are ſo ravenous, that Madam *Merian* ſaith, that *Deficiente pabulo, ſibimet ipſis invicem Eſca fuere.* And it is not improbable, but that the Ejection of the Liquor here mention'd, may be to pall the Appetite, or ſome Way or other elude its voracious Enemy.

*Lin.* 21. After *other*, Note 2. There are two Things in which the *Male* and *Female Moths* differ, which may be obſerved from the two *Moths* before us. 1. Their Size (here taken Notice of) the *Female* being larger than the *Male*, eſpecially in the *Alvus*, or Belly. 2. Their *Antennæ*; in the one ſmooth, in the other plumed: Which is the conſtant and certain Note of Diſtinction of the Sexes, not only of the *Phalæna* Tribe, but of other Inſects alſo; thoſe whoſe Horns are pectinated, or plumed, being always *Males*; thoſe with ſmooth Horns being *Females*.

## Plate XXVI.

*Lin.* 1. After *Caterpiller*, Note 1. Mr. *Ray* deſcribes this *Caterpiller* under the Name of *Eruca major, denſiùs piloſa, crebris pilorum faſciculis, ceu Scopulis aut Penicillis, denſis, rufis ornata*, Hiſt. Inſect. *p.* 282.

*Lin.* 11. After *Moth*, Note 2. *Goedartius* obſerves, that this and the following *Moth* do both cover their Eyes with their Fore-Legs. *Quum ſe primùm viſui offerret, anterioribus pedibus oculos tegebat, quaſi lucem ferre nondum valeret.* Vid. *N°* 80. And in the following *N°* 81. *Anterioribus pedibus ſolet caput integrum ita contegere, ut nullo modo appareat.* Mr. *Ray* ſaith, *Scapulæ, Caput, ut & Pedes primores (quos cum quieſcit antrorsùm rectà protendit, iiſque oculos & caput occultat) longa & denſa lanugine veſtiuntur*, Hiſt. Inſect. *p.* 186. This *Moth* Mr. *Ray* calls *Phalæna media cinerea, alis oblongis, exterioribus quatuor lineis nigricantibus tranſverſis diſtinctis*, Ibid. *p.* 185.

*Lin.* 17. After *Horns*, Note 3. This *Caterpiller* is by *Jonſton* called *Eruca Antennulata* in his *Table* XX. And *Mouſet* ſaith, *p.* 187, *Peniculum vocare ſoleo, quia utrinque ex fronte, atque etiam in uropygio Peniculus erumpit mollis, colore ceracino.* Of theſe *Caterpillers* with *Tufted Backs* there are ſeveral Sorts; ſome of which are taken Notice of in ſome of the following *Plates*. Theſe may be properly enough called *Erucæ penicillatæ*, The *Pencil-Caterpillers*: And ſuch as have pencil'd Horns, *Erucæ penicil-*

*latæ*

*latæ antennulatæ.* Mr. *Ray* (but omitting its *Antennæ*) hath deſcribed this *Caterpiller* by the Name of *Eruca mediæ magnitudinis, nigra, longis pilis hirſuta, quinque medio dorſo innaſcentibus pilorum longiorum ſcopis nigro albo & ex luteo viridi coloribus variis,* Ibid. *p.* 187.

*Lin.* 22. After *Moth,* Note 4. Mr. *Ray* deſcribes this *Moth* under the Name of *Phalæna obſoletè cinerea, alas corpori velut circumvolvens, pedes primores longa & denſa lanugine hirſutos antrorſum longiſſimè porrigens.*

## Plate XXX.

LIN. 18. After *Table,* Note 1. If any of theſe *Caterpillers* are the ſame with *Goedart's,* N° 44. they are what he ſaith, *Ob ſingularem timiditatem,* meticuloſam *nominavi.* For ſaith he, *Simulac quippiam non conſuetum ſibi percipit, in terram ſe præcipitem dat, inſtarque mortuæ quieſcit, corpore in orbem arctiſſimè convoluto.*

## Plate XXXI.

LIN. 8. After *Silver,* Note 1. This *Moth* is that which Mr. *Petiver* ſaith he received from Madam *Glanvil* out of the Weſt of *England,* and calls *Phalæna occidentalis Angliæ, vireſcens, lineis obliquis albeſcentibus,* Gazophyl. Nat. & Art. *Tab.* VII. *xi.*

## Plate XXXII.

LIN. 1. After *Caterpiller,* Note 1. If this *Caterpiller* be the ſame with *Goedart's* N° 30. there are ſeveral Things which will deſerve our Notice, 1. *Goedartius* obſerves, that this *Caterpiller* is fed with diversHerbs; but is very dainty in chooſing them, feeding only on ſuch as are freſh and green. 2. That it often changes its Skin; and after it hath ſo done, it reſts a whole Day from Food, not being able to take any, by reaſon of the Tenderneſs of its Skin, till it is ſomewhat harden'd by the ambient Air. And in the Mechaniſm of the Change of the Skin, his Obſervation is the ſame with mine in *Plate* VII. before, *Note* 2. viz. *Aliquoties pellem mutavit. Videtur enim adeo dura, ut corpore notabiliter aucto, eam rumpi neceſſe ſit, aliamque novam cutem ſubcreſcere.* Upon which Dr. *Liſter* very ſagaciouſly hath taken Notice of the ſame Mechaniſm in other Animals. *Tale quid,* ſaith he, *in Araneis etiam obſervavi; idem etiam obtinet in Animalibus, Cornua ſua exurentibus, ut* Cervis; *quæ, cum plenè maturuerint, ulteriori nutrimento privata, fiunt dura, & ab aliis ſuccreſcentibus expelluntur. Idem etiam in* Pilis Animalium, & Plantarum foliis, *in obſervationem venit. Nec minus certum eſt ſingulas Pelliculas ſibi mutuò ſucceſſive ſuppullulare, ſicut in Plantarum foliis.* 3. *Goedartius* ſaith, Theſe *Moths* fly chiefly by Night, but prudently ſhun the Flame of Fire or Candles, different from what others are wont to do.

*Lin.* 7. After *Moth,* Note 2. Mr. *Ray* deſcribes this, or ſuch a like *Moth* under the Name of *Phalæna media domeſtica, alis exterioribus rubro, rufo-cinereo, & albicante colore variis, cum tranſverſa linea albicante, imo margine laciniato.* He calls it *domeſtica,* becauſe *domos frequentat* Julio, Auguſto, & Septembri *menſibus.* Ray's Hiſt. Inſect. *p.* 183, 184.

Plate

## Plate XXXIV.

*Lin.* 18. After *gh.* Note 1. *Moufet*, p. 97, deſcribes three Sorts of theſe *Ragwort Moths*, differing ſomewhat in their Red Colours, as alſo in their Size. And I have obſerv'd alſo, that there is more than one Sort of theſe; ſome being larger, with ſlender *Antennæ*; and others leſſer, with club-headed Horns. But I take theſe to be only a Difference of Sexes, not of Species; and that the larger (which are figured here in this *Plate*) is the *Female*; the leſſer, with Club-Horns, the *Male*. Mr. *Petiver* calls this *Moth*, *Phalæna umbrica linea, maculiſque ſanguineis*, Gazophyl. *Tab.* XXIII. *Fig.* 6. Mr. *Ray* deſcribes this *Moth* under the Name of *Phalæna media alis exterioribus colore nigro & ſanguineo variis, extimo duntaxat margine nigro.* The *Ragwort Moth*, Ray's Hiſt. Inſect. *p.* 168.

## Plate XXXV.

*Lin.* 2. After *Colour*, Note 1. There is no doubt but this *Caterpiller* is the *Coſſus* famed for making a luxurious Diſh among the old *Romans*; of which *Pliny* ſaith in his *Nat. Hiſt.* Lib. XVII. *Cap.* 24. *In hoc Luxuria eſſe cœpit; prægrandeſque Roborum delicatiore ſunt in cibo: Coſſos vocant atque etiam farina ſaginati, hi quoque altiles fiunt.* But from its reddiſh Colour, *Goedartius* calls this *Caterpiller* the *Crab*, *quandoquidem cancro cocto concolor eſt*, ſaith he, *atque clypeos cancrinis gerit ſimiles; alioqui liceret eam* Τραγίζοντα, *ſive* Olentem Hircum *vocitare; quoniam malè olentem, ad inſtar Hirci odorem ſolet ſpargere.* The *Clypei*, which *Goedartius* mentions, are two *Plates*, ſomewhat reſembling a Crab's Fore-Legs, which are more plainly expreſſed in *Goedart*'s Draught, than in this 35th *Plate*.

*Lin.* 7. After *Oak*, Note 2. I have taken Notice of Holes, ſome of three quarters of an Inch, and ſome near an Inch bore, eaten in the Timber on which the Bells in *Upminſter Steeple* are hung. The Timber is as firm and ſound Heart of Oak, as was ever ſeen; and there is no doubt but that theſe Holes were eaten by thoſe *Coſſi*, when the Timber (now many Hundreds of Years old) was green.

*Lin.* 15. After *Trees*, Note 3. This Appearance of the *Moths* on the Bodies of the Trees they perforate, reſolves a great Doubt of *Goedartius*, who ſaith, *Quod ad modum attinet quo hæ Erucæ propagantur; is obſcurus eſt, ſaltem mihi non ſatis cognitus; imo, meo judicio, ſalvo meliori, non admodum facilè inveſtigari poteſt qua ratione progignantur. Extùs enim in Arboris Ligno, nullum foramen, nulla rima, nulla foramina, ne quidem exigua, deprehenduntur; & tamen intùs Erucæ inveniuntur. Id igitur ſolummodo certum eſt, haſce ſæpe in medulla Salicum offendi, & veroſimile iſtic ex pinguedine & putrefactione, à calore fota, gigni, uti multa Animalcula quæ* Sponte orta *vocant, ex putredine, & calore naſci ſolent.* This Surmize about their *Spontaneous Generation*, Dr. *Liſter* very juſtly denies, and judiciouſly affirms, *Coſſos hos ab Ovis, à* Parentibus Animalibus *excluſis, eſſe productos; æquè etiam patet minutulos hos Vermes capaces eſſe Arborem gradatim terebrandi, id eſt, pro alimentandi tempore, quæ quidem exigua foraminula forte poſt plenum eorum ingreſſum denuò coaleſcunt, ſaltem non ſunt*



*oculis,*

*oculis, niſi Lynceis, aſpectabilia. Addo inſuper, quòd forſan Tranſmutationem nullam ſubeant, ſed per multos annos ſub Erucarum Larva manent. Quod probe conſentit cum meis Obſervationibus; quæ omnia* Obſervationem *valde tediam reddunt, ſed de veritate ejus plane certus ſum.* Now, if there be three Years before this *Moth* comes from its *Egg* to its *Mature-State*, and it is found on the Body of the Trees it lays its Eggs on, at the proper Seaſon for their Hatching; there is no great Doubt to be made, but that what Dr. *Liſter* gueſſes to be the Way of the Generation of theſe *Coſſi*, is certainly in Fact ſo.

*Lin.* 21. After *Growth*, Note 4. It is not for the *Growth*, (as Mr. *Albin* here ſuppoſes) but the *Expanſion of the Wings*, that this *Moiſture* is neceſſary, as is ſhown in *Note* 2. on *Plate* 4. For the Wings are completely formed (both the Bones and Membranes) long before the *Moth* endeavours to break its Priſon: But this Humectation is of abſolute Neceſſity to make the Joints of the Wing-Bones pliant, and the Membranes capable of being expanded by them; as is not only agreeable to Reaſon, but is manifeſt from the Matter of Fact related in the *Note* now cited.

*Lin. ult.* After *N°* 39. Note 5. Mr. *Ray* hath accurately deſcribed this *Moth*, as alſo the *Caterpiller*, in his *Hiſt. Inſect.* p. 150, 351.

## Plate XXXVI.

*LIN.* 8. After *up*, Note 1. I am in ſome Doubt, whether this Contraction, or Shrivelling of the Wings of the Females, was not from the Want of due Moiſture ſpoken of in the preceding *Plate*; becauſe in theſe two Inſtances, which Mr. *Albin* here takes Notice of, and in moſt, if not all others that I have met with in the *Scarab-kind*, as well as *Papilionaceous*, where the Females have been defective in their Wings, it hath been from the complete Want of Wings, or that they had only a ſeeming Rudiment of Wings, and not from ſuch imperfect and uſeleſs Wings as are here deſcribed.

## Plate XXXVII.

*LIN.* 3. After *Wafer*, Note 1. It is with great Art and Sagacity that many *Caterpillers* make themſelves Cells, by folding up the Leaves of the Trees on which they feed. Their Manner is this, They roll up one Leaf round, like a hollow Cylinder, or join more together, which having brought to ſuch a due Size, or Capacity, as to fit their Body, they then weave it round, and ſo keep the Leaf or Leaves in their proper Poſition with this Web, which they draw from their Mouths. This Web they line their Cells with, and by that Means make them ſoft and eaſy, for their Repoſe; context and firm againſt the Rain; and ſhady and cool againſt the Summer-Heat; which two latter, *Goedartius* ſaith this *Caterpiller* is very impatient of.

*Lin.* 17. After *Caterpiller*, Note 2. *Goedartius* obſerves of this *Caterpiller*, that *Semper madida eſt, & fulgidum (quem limacis inſtar excernit) limum, quocunque locorum ſolet repere, terræ affricat, & adhærentem eum poſt ſe relinquit. Admodum etiam eſt timida, metuve anxia videtur; ut plurimum ſub herbæ foliis occultat; frequenter etiam locum, & ſtationem mutat, & tenebras diurna luce magis amat, velut Aviculæ, quæ de nocte volant.*

*lant. Semper noctu, at interdiu nunquam cibum capit, & quidem in altum erecto corpore, tanquam adversus omnem se tueri parata violentiam. Ubi autem serpit, velocitèr progreditur; fortean quod sibi malè metuat ab hostibus.* When this *Caterpiller* betakes itself to its *Aurelia* State, *Goedartius* saith, *Ex arena & limo contexit domicilium, & mutato colore Metamorphosin subit.* For Distinction-sake he gives this *Caterpiller* two Names, *viz. Quoniam se perpetim puram, nitidamque conservare solet,* Mundæ *nomen esto; aut siquidem* Pari *insidias & struunt, eamque persequuntur, & avide devorant,* Paresçam *per me licet nuncupes.*

*Lin.* 21. After *lm,* Note 3. Mr. *Ray* very well describes this *Moth* under the Name of *Phalæna minor alis oblongis, ex albo & cæruleo-nigricante variis, ad exortum flavis,* Hist. Insect. *p.* 222. Mr. *Petiver* calls it, *Phalæna minor alba, maculis nigrescentibus ornata,* Gazophyl. Nat. & Art. *Tab.* XXXII. 8.

## Plate XXXIX.

*Lin.* 2. After *Yellow,* Note 1. This is the seventh *Caterpiller* in *Aldrovand*'s sixth *Table,* and is of that kind of *Caterpillers,* which are called *Geometræ, quòd hominis Geometræ ferè instar incedendo agros dimetiantur;* saith *Aldrovand, de Insect.* Lib. II. *Cap.* 4. And their Way of Going, he saith, is, *Undatim, parte enim innitentes priore, contrahunt sese, adducentes posteriorem, arcuatimque incedunt.*

## Plate XLIII.

*Lin.* 16. After *Yellow,* Note 1. Mr. *Ray* hath described this *Moth* under the Name of *Phalæna media, alis amplis albis, maculis crebris nigris, & lineis transversis luteis variis,* Hist. Insect. *p.* 178.

*Lin. ead.* After *Moth,* Note 2. The Eggs of this *Moth* are small and oval, and of a Lemon-Colour, or light Yellow. But *Goedartius* saith he found them green, and laid upon certain Leaves, *eaque tunc pilis quibusdam aut lanugine obduci, animalculi instar, eaque ratione à frigore tutum conservari.*

## Plate XLVII.

*Lin.* 1. After *aa,* Note 1. These *Caterpillers* are of the Geometer-kind; *Alterius planè formæ sunt* (saith *Goedartius*) *ac reliquæ Eruca, quæ pedes solent habere in medio corporis, hæ vero in extremitatibus; iisque vim exercent non exiguam. Ubi locum* (saith he) *mutant, atque ab uno ramo in alium ascendere conantur, pedibus illum firmitèr apprehendunt, corpus sursum erigunt, serpentis instar, eoque modo tentant, experiunturque an alium sibi locum comparare queant. Adeo tenaciter se pedibus prædictis retinent, ut vix à corpore cui adhærent, divelli possint.*

*Lin.* 7. After *Moth,* Note 2. Mr. *Ray* hath well described this *Moth,* and calls it *Phalæna minor alis amplis, è cinereo albicantibus, interdum fusco-cinereis, quatuor in exteriorum margine maculis linearibus è fusco nigricantibus,* Ray's Hist. Insect. *p.* 179.

## Plate XLVIII.

LIN. 1. After *Caterpiller*, Note 1. Theſe *Caterpillers* I have found on the Elder, *&c.* I obſerved that they generally ſtand on ſuch Parts of the Tree, as are neareſt the Colour of their Bodies: By which Means they are not eaſily ſeen, being very like ſome Part or other of the Tree; ſome like the dead, ſome like the live little Branches. Whether they have a Power of changing their Colours, like the *Chameleon*, I never could diſcern. Theſe are of that Kind which *Goedartius* hath deſcribed and figured in *N°* 10, of Dr. *Liſter's* Edition, only without thoſe Bunches or Knots he ſpeaks of. Like his, they ſtand erect and ſtiff, and reſemble a little Stick. To diſtinguiſh theſe from other *Caterpillars*, he ſaith, *Licebit nuncupare, ἡ Ἔκτατον, ſeu* Extenſorem, *ſiquidem ſe rectà ſolet in longitudinem extendere: aut etiam* Grallatorem *ſeu* Καλοβάτην, *eo quod proſerpens magnis incedit paſſibus, & gradus facit Grallatorios:* But of theſe ſee *Plate* 94 following. Theſe *Moths* are different from that which *Goedartius* deſcribes, only the Under-Wings are pointed ſomewhat like his.

## Plate LI.

LIN. *ult.* After *N°* 8. Note 1. The Manner how theſe *Butterflies* lay their Eggs, Dr. *Liſter* very truly relates, as I have ſeen myſelf. Saith he, *Papilionem, in ipſo Ova ſua in Braſſicæ folium excludendi actu, cautè obſervavi. Quod hoc modo præſtatur; Papilio folii margine ſedens, caudam ſubter folium reclinans (extremitate Caudæ folium tangendo) Ovum unum excludit, tunc alium, dein tertium, donec omnia ad libitum excluſerit. Sed univerſa hæc Ova eo ipſo momento, extremis eorum minoribus ſurſum tendentibus figuntur, non autem lateraliter excreta ſunt; & poſtea, calore Solis, ſurſum vertuntur.* Mr. *Ray* calls this *Butterfly*, *Papilio alba media, alis exterioribus albis, duabus maculis nigris infra mediam longitudinem, verſus interiorem marginem notatis, interioribus ſubtùs flavicantibus*, Hiſt. Inſect. *p.* 114. This I take to be the ſame *Butterfly* that Mr. *Albin* hath figured in this 51ſt *Plate*, altho' Mr. *Ray* takes Notice but of two black Spots in the Wings, and Mr. *Albin* hath figured three, becauſe I have ſeen them about *Upminſter*, with two oftner than with three Spots, and yet take them to be of the ſame Species: The *Female* is *Merian's* 39. *Vol.* II. Mr. *Petiver* gives it the Name of *Papilio albus vulgaris minor*, Muſ. Pet. 826. The *Male* he hath given a Figure of in his *Gazophyl. Tab.* XLIX. 11. under the Name of *Papilio albus minor, apicibus nigris. The Leſſer white Cabbage* Butterfly. The *Female e.f.* he hath given a Figure of in his *Table* LXII. N° 4. which he calls, *The common white veined* Butterfly *with double Spots.*

## Plate LII.

LIN. 11. After *d*, Note 1. This *Caterpiller* is that which Mr. *Ray* deſcribes under the Name of *Eruca Braſſicam depaſcens viridis, lineâ in utroque latere è luteo albicante*, Hiſt. Inſect. *p.* 114.

Plate

## Plate LIV.

*Lin.* 8. After *Butterfly*, Note 1. Mr. *Ray* describes this *Butterfly*, and calls it, *Papilio Ulmariæ similis, sed minor, alis laciniatis, interioribus lineolâ albâ incurvâ notatis*, Hist. Insect. *p.* 118. Mr. *Petiver* calls it, *Papilio testudinarius alis laceratis.*

## Plate LV.

*Lin.* 8. After *Chrysalis*, Note 1. Dr. *Lister* in his Note on *N°* 3. in *Goedartius*, thus describes the Manner how these *Chrysalides* are suspended in their dry and safe Places of Retreat, *viz. Hoc unico filulo medium circumjecto præstari (nam sæpiusculè rei, dum adhuc in fieri, oculatus testis fui.) Quod fit, priusquam appareat sub Angularis Chrysalidis forma, hoc modo: Eruca caput suum deorsum reclinans, & locum, ubi se suspendere vellet, tangens, filum ex utraque corporis parte figit, transversim illud trahens; dein caput reducens, seque pendulo situ ponens, vibrat agitatque seipsam, adeoque pelliculam Erucalem frangit, quâ avolente, Chrysalis apparet, ita pendens prout describitur.*

And *Goedartius* himself takes Notice of a great Agitation of the *Caterpiller* about the Time of its changing its Skin, *viz. Priusquam in novæ formæ assumptione veterem pelliculam exuant, anxiè videntur laborare, corpus undiquaque quatiendo, jactando, contorquendo, ac tremendo, tanquam si acutâ febri corriperentur. Tandem corpore aliquoties sursum sublato, ac denuò deorsum dimisso, universum corpusculum suum in orbem contrahunt, unde adeo intumescit, ut pellis tota in longitudinem findatur, & sic paulatim, alia nova succrescente, decidat eoque tempore aliquandiu quiescunt.*

These Agitations of the *Caterpiller*, are of great Use to promote the Shifting off of the old dry Skin, of which I have given an Account in *Plate* VII. *Note* 2.

There is another Thing very odd, (if true) taken Notice of by *Goedart*, *viz. Quod ubi dorsum fuit Erucæ, ibi Alvus & Pedes extant ejus animalis in quod mutatur; & contra, ubi Alvus & Pedes Erucæ erant, ibi jam Tergum conspicitur Animalis, quod per Transformationem ex Eruca productum fuit.*

This Opinion of *Goedartius* Dr. *Lister* differs from, saying, *Chrysalis enim, meâ sententia, corpus suum intra aridam laxamque Pelliculam sat commode vertere potuit, etiam in ipso Exuvias suas deponendi Actu; quod Errori huic Ansam subministrare posset, præcipuè cum tam anxiè laboraret, atque molestaretur in illis diffringendis, ut advertit Author.*

Another Thing taken Notice of by *Goedartius*, is the *Moisture* he observed about the Wings of this *Moth* when it came out of its *Aurelia*-State, as well as of that *N°* 1. The Use of which I have shewn in *Plate* IV. *Note.* 2. and *Plate* XXXV. *Note* 4. Besides which, he took Notice of another Liquor, *Post hæc, ex Papilionis membris posterioribus quatuor guttæ sanguinis deciderunt; postque mediam horam gutta humoris clari instar aquæ.* This Observation Dr. *Lister* confirms from his own Observation, *Egomet ipse Liquorem illum rubrum decidisse sæpenumero observavi; necnon & parilem etiam conspexi, tametsi colore minimè rubrum, è Muscis quamplurimis,*

ex

*ex Chryſalidibus excluſis, prodiiſſe. Hujus Liquoris interventu corpora ſua intumeſcere faciunt, & Chryſalidum ſuarum Folliculos reſpectivè diffringunt. Hujus etiam Liquoris quædam quaſi irroratio alas ſuas adeo madidas reddit quando primo excluduntur & prodeunt. Vide in vita Peireskii de ſanguine è cœlis pluente, quod huc relationem habet.*

Theſe red Drops I myſelf alſo have often met with, altho' not ſo copious, as *Peiresk* did, who ſays, That when the Country-People were in that great Fright from the Bloody-Rain, he took Notice that it happen'd about the *Butterfly*-time, and that there were great Numbers of *Butterflies* then flying thick in the Air, with other material Circumſtances, that make it highly probable that the Bloody-Rain was nothing but the red Drops which fell from theſe *Butterflies.*

Of *Merian*'s Miſtake about this *Caterpiller*'s weaving a white Web, *&c.* See *Plate* LXX.

*Lin.* 11. After *Tortoiſe-ſhell*, Note 2. This *Butterfly* is deſcribed by Mr. *Ray*, *Hiſt. Inſect.* p. 118. Who calls it, *Papilio Urticariam referens major, Alis ampliori-bus; quam* Ulmariam *vocitare ſoliti ſumus.* Mr. *Petiver* calls it, *Papilio teſtudinarius major.* In *Engliſh*, *The greater Tortoiſe-ſhell* Butterfly. *Muſæum*, N° 315.

## Plate LVI.

*LIN.* 1. After *Caterpiller*, Note 1. It is a pretty Story which *Goedart* tells of this *Caterpiller*'s Choice of its Food: *Poſtquam huic Erucæ multas & varias edendas præbueram herbas, quas omnes faſtidiebat, tandem Urticas appoſui. Quod cum feciſſem, cum maxima admiratione vidi, quam gaviſam iis, & lætam caput iis affricare, non ſecus ac ſi earum adventum gratulari vellet, tantaque oblectatione eas vorantem, ut nihil ſupra.* This Nicety of *Caterpillers* in the Choice of their Food, Dr. *Liſter* ingeniouſly propoſes, 1. As a good Way for *diſcovering the Vertues of Plants.* 2. To find out a proper Wood for the *Sheathing of Ships.* To diſcover which, he adviſeth, *Aſciata politaque quædam Lignorum Fruſta, inſtar Talearum Anchoris affixa-rum, in aquis & fluminibus, Vermibus plurimum moleſtatis, ponere. Illud enim Ligni genus, quod Vermes repudiant, ſumma cum ratione in uſum deſignatum eligendum eſt.*

*Lin.* 11. After *Chryſalis*, Note 2. The *Chryſalis*, when diſturb'd, briskly moves itſelf this way, and that way, as if minded to repell any thing that diſturbs it. *Goedart* ſays, (*N*° 5.) that the *Caterpiller* fix'd its *Aurelia* to the glaſs Cover of the Box in which it was kept, *Ubi attingebatur, fortiter adeo ſe movebat, & corpore Vi-trum repercutiebat, ut in eo ſonitum daret, quaſi pulſati Tintinnabuli, tamdiu durantem, ut interea temporis, dum ſonabat, 40 numeros numeraſſes. Idcirco* (ſaith he) Κωδωνίζοντα, *per me licet eam nuncupare.*

*Lin.* 13. After *Lady*, Note 3. Mr. *Ray* deſcribes this beautiful *Butterfly* under the Name of *Papilio major, alis amplis; exterioribus fuſcis, albis, rubris maculis & lituris pulchrè variegata*, Hiſt. Inſect. *p.* 127. This is not that which Mr. *Petiver* gives the Name of the *Painted Lady* to; but it is ſomewhat like it.

## Plate LVII.

*Lin.* 11. After *Flight*, Note 1. Although ſuch *Caterpillers* as have Tails, or horny Excreſcences on their Rumps, do ſometimes produce ſuch *Moths* as fly ſwiftly, yet I do not think that it is a general Rule that they always do ſo. As for inſtance, the *Silk-Worm*, which hath an horny Tail, produceth a *Moth* that flies but ſlowly and heavily.

*Lin. ult.* After *Moth*, Note 2. This *Caterpiller* is not unlike *Goedart*'s 25th in *Liſter*'s Edition; but the Wings of the *Moth* are in this more jagged at the Ends than *Goedart*'s. Probably both this *Moth* and its *Caterpillar* are Mr. *Albin*'s, in *Tab.* VII. and deſcribed by Mr. *Ray* in his *Hiſt. Inſect.* p. 144, 145.

## Plate LVIII.

*Lin.* 9. After *Caterpiller*, Note 1. *Aldrovand* deſcribes this monſtrous *Caterpiller* to bear the Figure partly of a *Caterpiller*, and partly of a *Spider*; upon which Account, he gives it the Name of Ἀραχνοκάμπη, or *Erucaraneus*. His Deſcription is, *Sex primum à capite ex primis corporis flexibus pedes Araneorum pedibus ſimillimos emittit; dein interpoſitis aliquot flexuum intervallis, alios octo, more Erucarum, quas alioqui toto corpore refert. Tota ex cinereo ad luteum vergit, ſed Annuli coloris ſunt planè caſtanearum, ſicut etiam Pedes & Caudæ.* Aldrov. de Inſect. *Lib.* II. *c.* 4. I take this to be *Mouſet*'s *Vermis Staphylinus*, which he ſaith Mr. *Knivet* ſent him the Figure of, which he ſaith is common in *Norfolk*, and is poyſonous; as he proves from an Inſtance, *viz. Venenatam hujus naturam ex eo didicimus, quod Equi duo, dum cum fœno eas devorarent, toto corpore inflati interierunt.* For this *Mouſet* preſcribes a Remedy, which may be ſeen *p.* 198.

## Plate LX.

*Lin.* 1. After *Worm*, Note 1. This Grub, *Goedartius* ſaith is call'd in the *Belgick*, Tongue *Koren-Worm*, or *Corn-Worm*; *quia tritico multùm nocet, radices ejus conſumendo.* As to its manner of Feeding, *Goedartius* ſaith he kept it a whole Year in a glaſs Veſſel with *White flower'd Hen-bit. Atque obſervavi* (ſaith he) *tempore veſpertino Vermem ex Lagenæ fundo ſolitum fuiſſe ſurſum prodire, ut herba & flore veſceretur. Hoc peracto, denuò intra terram ſe abdidit; nunquam enim aut rariſſimè de die ſupra terram apparet.* Goedart. N° III.

*Lin.* 10. After *Chryſalis*, Note 2. As to their Change to their *Aurelia*-ſtate, *Goedartius* ſaith, *Poſtquam Vermes hujus deſcriptionis ſatis comederunt, & ad juſtam corporis magnitudinem ac ſtaturam pervenerunt, loca quærunt excelſa, ſicca & quieta, in pomariis, agris, aliiſque in locis, ut tutò quieſcere poſſint, atque ad Transformationem, quam expectant, ſe placide componant.* And afterward he ſaith, *Antequam Vermes hactenus deſcripti, in* Molitores *ſive* Melolonthas (their *Dutch* Name) *transformantur, annum ſupergreſſi ſunt quartum.*

*Lin.*

*Lin.* 12. After *Beetle*, Note 3. Mr. *Petiver* hath figured this *Beetle* in his *Gazophylacium*, Tab. XIX. 2. under the Name of *Scarabæus arboreus major caſtaneus*; from its being of a Cheſnut Colour. Alſo Mr. *Ray* calls this *Beetle*, *Scarabæus arboreus major*, Hiſt. Inſect. *p.* 104. or *Blind Beetle*, becauſe *Magno murmure & mugitu in hominum faciem involat, imo in obvium quodcunque, ac ſi cæcus eſſet, unde Anglice proverbialiter dicitur*; As blind as a *Beetle*. Dr. *Liſter* in his *Appendix* to Mr. *Ray*'s Hiſtory *de Scarabæis Britannicis*, calls it *Scarabæus maximus rufus, uropygio deorſum inflexo.*

*Goedartius* is of Opinion, that this *Beetle* is the Βρῶχος mention'd *Joel* i. 4. and ii. 25. So alſo the ingenious Dr. *Molyneux* of *Ireland* is of the ſame Mind, and thinks that our *Engliſh* Verſion errs in frequently tranſlating it the *Canker-Worm*, which is a *Reptile*; whereas in *Mal.* iii. 16, 17. the Βρῶχος, ſaith he, *is ſaid to fly, and to have Wings; and its Nature and Properties are moſt truly and particularly deſcribed in theſe Words*, It ſpoileth and flyeth away, they camp in Hedges in the Day, and when the Sun ariſeth they flee away, and their Place is not known where they are. I need not take Notice that the 70 mention in this Place, the Ἀκρὶς and Ἀττέλεβος, as well as Βρῶχος, by reaſon this latter is the moſt pernicious of them all. But it may be worth obſerving, that the Βρῶχος of the 70, is a Tranſlation of ſuch *Hebrew* Words, as greatly denote our *Beetle*. Thus in *Levit.* xi. 22. 1 *King.* viii. 37. *Nah.* iii. 15. Βρῶχος is the Tranſlation of אַרְבֶּה, which hath its Name from a Multitude, as ſetting upon the Deſtruction of any thing in Troops and great Numbers. In 2 *Chron.* vi. 28. the Original Word is חָסִיל *Abſumptor, Depaſtor.* And laſtly in *Amos* vii. 1. the Word in the Original ſignifies *green Corn or Herbs.* All which are very applicable to our *Chafer*, which flies in great Numbers, and preys on, and conſumes the green Plants in great abundance; of which we have divers diſmal Accounts; particularly one from the laſt named Dr. *Molyneux*, who ſaith, that *A ſhort while after their coming* (into *Ireland*) *they had ſo entirely eaten up and deſtroy'd all the Leaves of the Trees for ſome Miles round about, that the whole Country* (*although it was in the middle of Summer*) *was left as bare and naked, as if it had been in the Depth of Winter. And the Grinding of the Leaves in the Mouths of this vaſt Multitude all together, made a Sound very much reſembling the Sawing of Timber*; with a great deal more Miſchief, for which I referr to the *Phil. ſ. Tranſact.* N° 234. or Mr. *Lowthorp*'s *Abridg.* Vol. II. *p.* 779.

*Mouſet* alſo tells of another Miſchief they did, in his *Theat.* p. 160. *viz. Anno Chriſti* 1574. *Feb.* 24. *tantam eorum multitudinem in Sabrinam fluvium delapſam, ut aquaticis Molendinis rotas ſiſterent atque obruerent: Et ſane niſi una cum hominum induſtria, gallinæ, anates, caprimulgæ, tinnunculi, verſpertiliones, aliæque prædatrices aves* (*quæ hos in primariis habere cibis videntur*) *auxilio fuiſſent, ſuffocata ab iis Molendinæ etiamnum hodie obmutuiſſent.* As for the great Numbers of theſe Inſects here mention'd, no doubt can be made; but the latter End of *February* was a very improper Time for their Appearance.

Theſe *Beetles*, *Mouſet* ſaith, were a delicious Food to divers Birds; and ſo Dr. *Molyneux* ſaith they were to the *Swine and Peultrey, which watch'd under the Trees for their*

*their falling, and eat them up in abundance, being much pleaſed with the Food, and thriving well upon the Diet. Nay* (ſaith he) *I have been well aſſured, that the poorer Sort of the Native* Iriſh, (*the Country then labouring under a Scarcity of Proviſions*) *had a Way of Dreſſing them, and lived upon them as Food.*

Theſe *Beetles* I have myſelf alſo obſerved to be coveted by divers Birds; particularly I have ſeen *Sparrow-Hawks* catching them at the Tops of Trees, when they have been flying about there in the Summer Evenings. Theſe *Hawks* firſt catch theſe *Beetles* in their Bills, then very dextrouſly take them thence with their Talons, and ſo feed on them, flying about all the while, and picking what they like in them.

Having ſeen many Creatures eating theſe *Beetles*, I have had the Curioſity to taſte them myſelf, and found their Taſte not diſagreeable, but grateful: Which minds me of Dr. *Molyneux*'s ingenious Obſervation, about the Permiſſion of the *Jews* to eat theſe Kinds of Animals, *Lev.* xi. 22. *I muſt confeſs* (ſaith he) *it long ſeemed to me very unaccountable, that here among the pure, wholſome Creatures, proper for Human Nouriſhment,* Beetles, *and thoſe other naſty, dry, and unpromiſing Vermin, ſhould be thought fit to be reckon'd up as clean and proper for the Food of Man: But ſince I have had ſome little Experience of what hath happen'd among ourſelves, I cannot but admire the ſagacious Prudence of that Divine Lawgiver. 'Tis certain,* Paleſtine, Arabia, Egypt, *and the other neighbouring Countries about them, were all extremely ſubject to be infeſted with theſe Sorts of pernicious Vermin; and therefore,* Moſes *foreſeeing the great Dearth and Scarcity that they might one Day bring upon his People, gives them here a permiſſive Precept, or a Sort of Hint, what they ſhou'd do, when the Corn, Graſs, Olive-Trees, Fruit-Trees, Vines, and other Proviſions were deſtroy'd by the* Locuſt, *and* Βρῦχοι, *or* Beetles *ſwarming in the Land; why then, for want of other Nouriſhment, and rather than ſtarve, he tells them they might eat, and live upon the filthy Deſtroyers themſelves, and yet be clean. And thus we ſee the Native* Iriſh *were Authors of a* Practical Commentary *on this Part of the* Levitical *Law, and by Matter of Fact, have explain'd what was the true Senſe and Meaning of this, otherwiſe, ſo dark and abſtruſe a Text. It is alſo more than probable, that this ſame deſtructive* Beetle *we are ſpeaking of, was, that very Kind of* Scarabæus, *the idolatrous* Egyptians *of Old had in ſuch high Veneration, as to pay Divine Worſhip unto it, and ſo frequently engrave its Image upon their* Agulios *and* Obelisks, *as we ſee at this Day. For nothing can be ſuppoſed more natural, than to imagine a Nation, addicted to Polytheiſm, as the* Egyptians *were, in a Country frequently ſuffering great Miſchief and Scarcity from Swarms of devouring Inſects, ſhou'd, from a ſtrong Senſe and Fear of Evil to come,* (*the common Principle of Superſtition and Idolatry*) *give ſacred Worſhip to the viſible Authors of theſe their Sufferings, in hopes to render them more propitious for the future. Thus 'tis allow'd of all hands, that the ſame People adored as Gods the ravenous* Crocodiles *of the River* Nile; *and thus the* Romans, *tho' more polite and civilized in their Idolatry,* Febrem ad minus nocendum venerabantur, eamque variis Templis extructis colebant, *ſays* Valer. Max. *Lib.* II. *Cap.* 5.

## Plate LXI.

*Lin.* 2. After *Orach*, Note 1. *Goedartius* ſaith, *Hoc Erucarum genus herbaſcenti Tritico inſerpens offendi; aſt alibi fruſtrà quæſivi.* Alſo that, *Pernicioſa ſunt animalcula; ſiliquas enim, ſeu Folliculos virides, quibus Triticum increſcit, exedunt.* Now, how to reconcile Mr. *Albin*'s Account of its Eating ſmall Inſects on the *Orach*, with *Goedartius* ſaying he never found it on any thing but green Wheat; is not eaſy, unleſs the *Animalcule*, when it firſt comes out of the Egg, ſhould feed on the Leaves of the green Wheat, and afterwards (a little before its Change) ſhould feed on ſmall Inſects. For it was but a Day or two before their Change, that Mr. *Albin* found them eating Inſects; and I myſelf have often obſerved them on Pales, ſome cloſely adhering thereto, and ſome hunting ſmall Inſects thereon.

In the Year 1707, I had an Opportunity of obſerving the Generation of the *Lady-Cow*; which was thus: This *Beetle* having laid an Egg, (if I miſremember not, it was but one) and cover'd it with a ſilken Membrane, then betook itſelf to Incubation, covering the Egg, (as an Hen doth) by laying its Belly cloſe over it; from whence I could not without Difficulty, and hurting the *Lady-Cow*, remove it. I had not the Fortune to ſee the *Nymphæ* hatching, but ſoon after, in the beginning of *May*, I ſaw divers of them creeping about.

This *Nympha*, *Goedartius* calls χλωροπυροφάγον, or γεωργοχαλάζα, *appellatione mutuatâ à quodam Propugnaculo in Diœceſi Hulſtana in Flandria ſito, ita dicto, quod Ruſticis fuerit calamitas, eoſque belli tempore vehementèr infeſtarit*, Liſter's Goedart. N° 112.

*Lin.* 7. After *Beetle*, Note 2. *Goedartius* ſaith, That from the *Nympha* of this *Lady-Cow*, came *Animalculum maximè ſitibundum.* (Which I ſuppoſe he means the *Beetle* itſelf, not the *Aurelia*, becauſe I conceive the *Aurelia* cannot remove from its Place) *Namque ſimulac prodierat, largitèr & ſæpe bibere obſervavi. Ex quo conjecturam feci, naturæ hoc Animalculum eſſe calidioris.* From which its fiery Temper, and its feeding upon green Corn; I ſuppoſe, he gave it the former of the two Names, of the *Green Fire-Eater*, as he did the latter from its *hurting the Husbandman's Corn.* See *Liſter*'s *Goedart.* before cited.

Mr. *Petiver* gives the Name of *Cochinella Anglica vulgatiſſima, ſeu rubra*, 7 (rather 6) *nigris maculis notata.* He calls it *Cochinella*, I ſuppoſe, becauſe (as he told me himſelf) it ſtrikes a Dye, not much inferiour to that of the true *Cochinele-Fly.*

*Lin.* 12. After *d*, Note 3. Of this *Nympha* or *Grub*, *Goedartius* ſaith, *Rarò invenitur, ſiquidem ferè ſemper latitat in fundis lapidoſis & humidis, quandoque tamen in Hortis graſſatur; conqueruntur enim Hortulani aliquando non levem herbis hunc inferre noxam; nec admodum facilis captu eſt; novit enim callidus ſub terra ſe occultare, aut aliquem perſentiſcens motum aut agitationem, confeſtim in illam irrepere. Omnis generis herbis veſcitur, earumque radices exedit; vorax admodum eſt, atque vix ſaturandus.* And afterwards, *Difficultèr extirpari poteſt, ita callidus & aſtutus eſt, ut nunquam ferè totus extra terram emineat, ſed capite ſolummodo, quod confeſtim novit intrò trahere, ad minimum*

*minimum quod ſentit, auditve ſtrepitum, extemplo ſe proripit, & ſe abdit in latibulum; neque capiendo eſt, nec exturbando, niſi beneficio ligonis. Probè etiam ipſi perſpectum eſſe videtur, ipſum inviſum eſſe & exoſum hominibus; quocirca eos, veluti Mortem horret.*

*Swammerdam* ſays, *Piſcatores Belgas vernaculo idiomate* Im *vel* Imme *vermiculum hoc vocare.*

*Lin.* 17. After *Fly*, Note 4. This *Fly*, *Swammerdam* calls by the Name of *Tipula terreſtris*; and both the Male and Female are thoſe deſcribed by *Aldrovand*, in his 3d Book *de Inſectis*, *Cap.* 5. *Tab.* I. *N°* 3. and *Tab.* III. *N°* 1. which he took to be two diſtinct Species of the *Culices maximi*. *Goedartius* ſaith, that both Boys, and others call them *Nayer*, that is, *Taylors*, (according to our *Engliſh* Name) but for what Reaſon he can't tell. Dr. *Liſter* ſaith, they are call'd *Drummers*, in his *Note* on *Goedart's* 139th, and that they lay Eggs of a Violet Colour, and that he obſerved five Species of them in *England*.

Theſe *Taylor-Flies*, ſaith *Goedartius*, *admodum ſunt calidi & ſalaces. Decuplo quidem plures numero Maſculos invenire eſt hujus generis, quam Fœmellas, quod mirandum eſt. Hoc etiam experiemini, ſi animadvertitis, uti ego hiſce oculis ſæpè vidi, ubi Maſculus cum Fœmella coit, plerumque* 5 *vel* 6 *Maſculos circumvolitare ultrò citroque, quorum ſinguli ſuas Coeundi vices præſtolantur, & priores captare moliuntur & ſatagunt. Cui autem primæ dantur vices ſe cum Fœmella miſcendi, is ei per biduum continuum affixus manet; & ſolutus Maſculus, non admodum diu poſt moritur; ſed ſuperſtes Fœmella manet. Ubi vero Fœmellæ ſemen, & quod concepit, jam excernendo maturum factum eſt, poſtremum illa corpus terræ infigit, atque ſemen in ea deponit; ex quo noxium hoc Animal, Bruchus hic, ducit originem; qui non, niſi quum tres jam habet annos progignendæ Sartorum ſoboli aptus eſt.*

This wiſe Proviſion of the Divine Providence to reſtrain the too great Propagation of this ſo noxious a Creature, *Goedartius* piouſly admires and celebrates, and exhorts, *Grati, quæſo agnoſcite, & deprædicate.*

In this Inſect, *Aldrovand* takes Notice, that *Sub Alis duas habet Appendices cum apicibus, quæ Inſectorum quorundam Antennas mirum in modum referunt; ſed in quem finem his à Natura dotetur, me, ut verum fatear, adhuc latet, cum eas in aliis Inſectis me obſervaſſe meminerim nunquam.*

Theſe Appendices are very remarkable in this *Fly*, rather more than others, by ſtanding out pretty far from the Body, and having pretty large *Apices* or *Balls* at the Ends: Whereas in other *Flies*, thoſe *Pointils* or *Poiſes* lie under a little Covering, like a Shell, at the Bottom of the Wings, or their Conjunction to the Body. Theſe *Poiſes* are only found in ſuch Inſects as have only two Wings, and never in ſuch as have four. And their Uſe is to *Poiſe the Body*, and keep it upright and ſteddy in Flight; like the long Pole uſed by Rope-Dancers for the ſame Purpoſe. But of this ſee my *Phyſico-Theol.* Book VIII. *Chap.* 4. *Note* .

## Plate LXII.

LIN. *ult.* After *Fly*, Note 1. This *Fly* is not of the *Ichneumon-kind*; but what may be ſtrictly called, of the *Fly-kind*, as appears by this very Figure of Mr. *Albin*; as alſo by the *Fly* itſelf, which I have hatched. For the *Characteriſtick-Notes* of the *Ichneumon-Tribe*, are four Wings, and the *Alvus* ſlender at the Upper Part near its Junƈture to the *Thorax*. But our *Turnep-Fly* hath but two Wings, and a cylindrical *Alvus*, as many other *Flies* generally have.

## Plate LXIII.

LIN. 8. After *e*, Note 1. This *Maggot* is that which Dr. *Plot* deſcribes in his *Hiſt. of Staffordſhire*, under the Name of *Eruca glabra caudata aquatico-arborea*; becauſe he found it in the Water ſtagnating in an hollow Tree; but it is common in Sinks and Puddles of dirty Water, *&c.* This, *ob Origenis fœditatem, Vermiculum Porcinum appellavi*, ſaith *Goedartius*, N° 126. Theſe *Maggots* he rightly ſays, *Latebras quærunt in fiſſuris & rimis veterum parietum.* In which Places I have myſelf found them either in their *Chryſalis-ſtate*, or preparing themſelves for it: But for a further Account of this *Maggot*, and the *Bee-like Fly* that it produceth, ſee my *Phyſico-Theol.* Book IV. *Chap.* 15. *Note* 10.

*Lin. penult.* After *Bee*, Note 2. This Inſect is very like a *Bee*, but is of the *Fly-kind*, having but two Wings, whereas *Bees* have four. Of whoſe Wings *Goedartius* hath a pretty Obſervation, *N° 126. viz. Quum primum natam hanc Apem conſpicerem, Alis eam carere exiſtimabam; nam earum loco nihil potui animadvertere, præterquam duas exiguas maculas albas, inſtar ſummitatum vulgarium acicularum; ſed ſtatim cœpit Apis maculas illas albas poſterioribus ſuis pedibus explicare; ac ſpatio duarum horarum ita adaptavit, ut perfectam haberent Alarum formam, & ad Volatum eſſent idoneæ.* Mr. *Ray* deſcribes this *Fly*, and its *Nympha* in *Hiſt. Inſect.* p. 272. The *Fly* he calls *Muſca Apiformis, tota fuſca, cauda obtuſa, ex Eula caudata in Latrinis degente, orta.*

## Plate LXIV.

LIN. 1. After *Worm*, Note 1. *Goedartius* gives a curious Account of this *Hexapode Nympha*, (N° 104.) *viz. Inſolitum hoc Animalculum admodum lentigradum eſt. Ubi id vexas, & ad iram extimulas, ſe valde iracundum, & ſuccenſum præbet; inſuper audax & imperterritum* (*quapropter illud* Τολμηεὸν, Audax *aut* Intrepidum *vocitare viſum eſt*) *namque ſtationem ſuam ſervare audax, non niſi ipſum magnopere infeſtes, de loco proſerpit. In poſteriori corporis ſui parte, limoſam geſtat pinnam, qua ſe defendit, ac protegit, & eam ubicunque deponit, iſtius beneficio ſe terræ ita agglutinat, & figit, ut non cedat retrò; tum corpuſculum omne contrahit, & anteriori ipſius parte, & cornutis, ſeu dentatis, quibus eſt armatum, forcipibus ſe adverſus illatam ſibi vim gnaviter tuetur.*

*Lin.* 4. After *Flies*, Note 2. Having a great Deſire to nurſe up this ſo rare an Animal, *Goedart* offered it divers ſorts of Food; which it refuſed, until hitting

hitting upon dead Insects, particularly a *Beetle*, he saith, *Se mirum in modum oblectare, Scarabæum omnem intùs exedere, in exesum irrepere cadaver, & parti ejus posteriori nendo attexere sibi domunculum, exiguæ ad instar Cameræ, ad latus utrumque adeo amplum, ut in ea se commodè posset quaquaversum flectere.*

*Lin.* 8. After *Fly*, Note 3. This is that *Fly* which *Mouset* gives the Name of *Chrysopis* to, from its beautiful Gold-colour'd Eyes, *Theat. Insect.* p. 62.

## Plate LXVI.

*Lin.* 1. After *Maggot*, Note 1. This *Nympha* is the very *Maggot* described by *Goedart*, agreeing in its Way of Feeding, and all other things here mention'd with *Goedart*'s; but the *Fly* which he observed to be produced, was spurious, being only one of the larger *Ichneumon Flies*, Lister's Goed. N° 134.

*Lin.* 12. After *Fly*, Note 2. This is the *Block-headed Bee-Fly*.

## Plate LXVII.

*Lin.* 12. After *Caterpillers*, Note 1. I know not of any *Caterpillers* of the *Ichneumon-kind*; but the *Ichneumons* bred in *Caterpillers* are such as are generated from the Eggs of *Ichneumons* laid in those *Caterpillers*. Which Eggs produce *Maggots*, not *Caterpillers*. So that the *Caterpiller* is so far from being a *Parent*, or *Nympha* of the *Ichneumon*, that it serves only as a *Matrix* to its Generation: But the Insect that comes from these *Caterpillers*, I take to be a small white *Moth*, much feathered.

## Plate LXX.

*Lin.* 1. After *Caterpillers*, Note 1. *Merian*, in her Description of the *Greater Tortoise-shell Butterfly*, Part I. N° 2. saith, *Priusquam metamorphosin subeant, repetitis vicibus deponunt exuvias; postmodum albam sibi telam parantes in Aurelias fuscas transfigurantur.* Now, if she means the *Caterpillers* of the *Tortoise-shell Butterfly*, (she was describing, that weave themselves such Webs) it is a great Mistake; but it is evident from her second Figure, that it is the *Caterpillers* here described which make those white Webs. For only *Caterpillers*, never *Butterflies* weave any *Webs*.

## Plate LXXII.

*Lin.* 1. After *Caterpiller*, Note 1. If this be *Goedart*'s 41st *Caterpiller*, it hath this odd Faculty, *viz. Sub terra de die perpetuò latitat, nec ante vesperam foràs prodit; sed nocturno tempore sibi alimentum comparat quod toto die ipsi sufficiat; adeoque Vespertilionibus quodammodo & Noctuis similis est.*

## Plate LXXIII.

*Lin.* 1. After *Caterpiller*, Note 1. It is probable that this *Caterpiller* is the 55th of *Lister*'s *Goedartius*. And if so, it *Cibum sumit nocturno tempore* (saith *Goedartius*) *de die immota quiescit, metuens ne ab avibus deprehensa devoretur.* And

for

for this its ſafe Repoſe by Day, it prepares itſelf a Caſe, by folding up (round) the Leaves of ſuch Plants on which it feeds.

## Plate LXXVII.

*Lin.* 5. After *Moth*, Note 1. If Mr. *Albin* hath truly painted this *Moth*, and that mark'd *gh*, in *Tab.* LXXIX. following, then I think this to be that *Moth* deſcribed by Mr. *Ray*, rather than that. Mr. *Ray* calls his *Moth*, *Phalæna è mediis minuſcula, alis exterioribus cinereo & nigricante colore variis, mediâ parte lineâ albâ y literam aliquatenus referente, notatis*, Hiſtor. Inſect. *p.* 163. And the Deſcription which he gives afterwards of the Colours of the Upper and Under-Wings, agrees much better with this *Moth*, (which is throughout of a dark Colour) than with the other, which hath its Upper-Wings of a reddiſh Colour.

## Plate LXXIX.

*Lin.* 7. After *e*, Note 1. The *Caterpiller e* agrees with *Goedart's* 14th in the two *Holders*, near the middle of the Body, (which are rare) but the *Moth* is not the ſame. Some other of *Goedart's Caterpillers* alſo agree in theſe laſt mention'd *Holders*, as his two next, *viz.* N° 15, 16, *&c.* but the *Moths* are likewiſe different.

*Lin.* 15. After *Y*, Note 2. This *Moth* I take to be that which Mr. *Petiver* hath named the *Lambda-Moth*, from the white Mark in each Wing, reſembling the *Greek* Λ. which *Moth* he hath figured in his *Gazophyl.* Tab. LXIV. *N° 6.* Mr. *Ray* deſcribes alſo a *Moth* called the *Y*; of which ſee *Tab.* LXXVII. before.

## Plate LXXXIII.

*Lin.* 1. After *a*, Note 1. This *Caterpiller* is *Aldrovand's* 16th, in his 3d *Table*; which he ſaith, *Facta, ſe velut in vertibulum contorquens, Stellæ figuram exprimit coronatæ.*

*Lin.* 7. After *Web*, Note 2. The Briſtles or Hair of *Caterpillers* is of great Uſe to them, in theſe two, among other Reſpects. 1. To be a Guard unto them againſt the Annoyances from Birds, Inſects, and even *Caterpillers* themſelves; ſome of which *Goedartius* hath obſerved, will, for want of Food, devour one another; of which ſee the *Notes* on the 25th *Plate* before. 2. To aſſiſt in making their Web, for their ſafe and comfortable Repoſe in their *Aurelia-ſtate*; theſe Briſtles not only affording Materials for the Web, but alſo Strength and Firmneſs to it. And it is very obſervable, what an excellent Proviſion is made of a *glutinous Matter* in the Body of the *Caterpiller*, for the cementing thoſe Briſtles together; and with what Sagacity and Art the *Caterpiller* both weave and cement them into a *Theca*, or *Caſe*.

## Plate LXXXIV.

*Lin.* 3. After *Willow*, Note 1. *Goedartius* ſaith, *Calore ſolis provenit ex ſemine quod foliis Populi adhærebat.* And as for its Food, *Delectatur foliis Populi & Salicis, quæ ſimilis ferè ſunt naturæ & temperamenti.* And I know of no better (if ſo good a Way) of judging of the Nature and Vertues of Plants, as by the Feeding of *Caterpillers*, and other Animals upon them; who are all endow'd with ſuch complete Organs for the taking in, and Digeſtion of Food, and ſuch accurate Senſes for the diſtinguiſhing what is wholſome or unwholſome, (of which I have given an Account in my *Phyſ. Theol.* Book IV. *Chap.* 11.) that it is reaſonable to conclude ſuch Plants to agree or diſagree in their Vertues, as are choſen or refuſed by thoſe ſagacious Feeders: Of this ſee Dr. *Liſter* before.

## Plate LXXXIX.

*Lin.* 1. After *Caterpiller*, Note 1. Both *Goedartius* and Mr. *Ray* deſcribe this *Caterpiller* to have on each ſide a Tuft of Hair, reſembling Oars, which Mr. *Albin* takes no Notice of. *Spatio inter pedes priores*, (ſaith Mr. *Ray*, Hiſt. Inſect. *p.* 174.) *& poſteriores medio, duo (hinc inde unus) exeunt Pilorum faſciculi velut Remi; anterior pallidorum, poſterior nigrorum.* Another Thing taken Notice of by *Goedartius* is, *Magna anxietate pellem mutat, quotieſcunque id fit, corpus ſuum madidum, ac ſudore quaſi perfuſum, pluma antè deſcripta* (that is, with the hairy *Antennæ*, and other Bruſhes and Tufts of Hair it is accouter'd with) *abſtergit & deſiccat. Tota die poſtea quieſcit ſine alimento, os quippe ipſi totumque corpus ſolito mollius eſt ac tenerius.*

*Lin.* 8. After *Moth*, Note 2. Theſe Female *Moths* without Wings are not uncommon among ſome of the *Moth* Tribe. *Goedartius* hath taken Notice of two that produced ſuch unwing'd Females; and Mr. *Albin* hath in this, and the two following *Plates*, taken Notice of three more, and another in *Plate* 100. Both theſe Female Productions *Goedartius* admires at, calling that 78 *b. mirandum Animalculum*, and this here figured (which is probably *Goedart's* 79th.) *Animalculum miſerum, quod neque Papilio eſſet, neque Eruca.* The Reaſon of its Degeneracy (as he thought it) he ſaith, was, *Quod ante tempus à cibo abſtinuiſſet, & corpore nondum ſatis perfecto ad Tranſmutationem perveniſſet.* The ſame Opinion Dr. *Liſter* was of, who ſaith, *Papilio fuit, ſed, ut Author probè obſervavit, Famelicum: Cujuſmodi plures ipſe habui, quorum Alæ adhuc imperfectæ fuerant, aut ſaltem inhabiles ad expandendum.* But I am clearly of Opinion, that both *Goedartius* and Dr. *Liſter* were miſtaken; and that theſe which Dr. *Liſter* ſaith had ſuch *Alæ imperfectæ*, or *inhabiles ad expandendum*, were only ſuch whoſe Moiſture was waſted, that I have ſpoken of before in *Plate* IV.

What I have more to ſay about theſe Female *Moths*, I refer to my *Note* on the next *Plate.*

## Plate XC.

*Lin.* 9. After *Female*, Note 1. One of theſe Female *Moths*, *Goedartius* gives a remarkable Deſcription of, *N°* 78 *b.* That it is *Forma mirandum Animalculum Alis deſtitutum, at Corporis Partem poſteriorem craſſam, atque Ovis habens refertam, & pellucida*

*pellucida Membranula obtectam, per quam Ova ſeſe conſpicienda dabant. Poſtero Die omnia deponebat Ova, & ſiquidem Membranula, ad inſtar Verbaſci, Lana cooperta erat. Lanam evellebat, eaque tegebat Ova ſua; proculdubio ex ingenita ſibi ſagacitate, ut calida & illæſa manerent. Tunc temporis Nihil ei erat reliquum niſi Corporis Pars anterior, & Pedes; & Forma ſua ſimilis Araneæ, anteriori Corpore & Pedibus progrediebatur.*

By reaſon of the great Care and Diligence uſed by theſe Female *Moths* in covering up their Eggs, *Goedartius* gives them the Name of Μελίμναι, or *Careful.*

This Production of the Female *Moth*, Dr. *Liſter* in his *Note* on *Goedart's* 78 *b.* thinks to be, *Non ſpurius, ſed Monſtroſus Partus, qualis eſſet avis Excluſio abſque alis.* In the next place he thinks it *Magis adhuc mirabile, Prodigioſam hanc Fœmellam ova ſua deponere.* Which plainly ſhews, that the ſagacious Doctor little dreamt of its being a Female.

Mr. *Ray* hath a Female *Moth* like theſe in this and the preceding *Table*, which he calls *Phalæna cinericea ventricoſa, corpore brevi, alarum expers*; which he ſaith comes from ſuch a like *Pencilled Caterpiller* as is here figured; only theſe here have not *Tufts* on the ſides, as thoſe have deſcribed both by Mr. *Ray* and *Goedartius.* Vid. *Ray's* Hiſt. Inſect. *p.* 173.

## Plate XCI.

LIN. 1. After *Caterpiller*, Note 1. This and the *Moth* following are both of the *Geometer-Tribe*, as are divers others in the following *Tables.*

## Plate XCIV.

LIN. 1. After *Caterpiller*, Note 1. If this be *Goedart's* 10th *Caterpiller*, there are ſeveral Things remarkable in it. 1. That it feeds but once a Day, *Semel duntaxat de die, veſperi nempe, poſt Solis occaſum, ubi tenebræ ingruebant, circa mediam ſextam. Et quotieſcunque cœnabat, ad ſatietatem jam paſta ſe rectà extendebat, & in altum. Hoc in ſitu eam nulli rei magis appoſitè comparare poteram, quam Bacillo ex faſcibus faginis deſumpto; à primo etiam intuitu pedes obſervare nequibam, nec tamen iis deſtitutus erat.* Beſides its Feet, he obſerves. 2. That *in anteriori corpore illi erat prominens aut eminens Tuberculus, cujus beneficio iſti quodcunque attingebat, ita ſe annectebat, ſugens continuo, inſtar Hirudinis, ut vix divellendo eſſet, imo ſe potius in fruſta diſtrahi paſſa fuiſſet, quam divelli.* Beſides which *Tuberculus*, he ſaith thus, *Ita tenax etiam ipſi poſtremum corpus erat; namque Aurifabri forcipem referebat, qua ſolet Crucibula foco eximere, & poſtremam corporis partem ad modum clauſæ Forcipis claudebat.* Which Structure and Uſe of the hinder Feet or Holders is common to all the *Caterpillers* of the *Geometer-Tribe.* 3. He ſaith, *Hoc in ſitu, & poſitura* (*i. e.* erect, or as here painted in the lower Figure of this *Table*) *quandoque totum diem deſidebat, tanquam inanimis, & immota, quanquam quaſſata, & infeſtata.* But ſometimes it would change its Poſture, *Atque pendula capite deorſum vergebat,* (as is here figured in the upper Part of this *Table*) *ab hora 6 matutina ad 8 veſpertinam, qua ſolebat ſemper proſerpere, noctuque edebat, & interdiu dormiebat.* 4. Upon the Failure of its Food, (which was Elder Leaves) he ſaith, *Integram jejunabat hyemem, nihil agens aliud, præterquam*

*præterquam quod ſingulis ſe noctibus movebat loco, una nocte pendens capite deorſum, & altera ſurſum, & ſemper recta, extenſo corpore. Ita ſe oblectabat, & temporis fallebat tædium.* Laſtly, He takes Notice of this *Caterpiller* ſwallowing ſmall Stone, or Gravel, to ſcour its Maw.

*Lin.* 9. After *Moth*, Note 2. Mr. *Ray* calls this *Moth*, *Phalæna media ochroleucos, alis ampliſſimis, exterioribus duabus lineis tranſverſis è fulvo virentibus, interioribus una diviſis.* Hiſt. Inſect. *p.* 177.

I take this *Moth* to be Mr. *Petiver's Papilio ſtraminea ſtriata*, in his *Gazophyl. Tab.* LVII. 6.


# Books *printed for* W. *and* J. Innys.

1. MR. *Derham's* Phyſico-Theology; or, A Demonſtration of the Being and Attributes of God from his Works of Creation; being the Subſtance of ſixteen Sermons preach'd in S. *Mary-le-Bow* Church, *London*, at the Honourable Mr. *Boyle's* Lecturers, in the Years 1711 and 1712, with large Notes, and many curious Obſervations; the 6th Edition, 8*vo.* 1723.

2. ——— his Aſtro-Theology; or, A Demonſtration of the Being and Attributes of God, from a Survey of the Heavens, illuſtrated with Copper-Plates; the 4th Edition, 8*vo.* 1721.

3. Philoſophical Letters between the late Learned Mr. *Ray*, and ſeveral of his ingenious Correſpondents, Natives, and Foreigners. To which are added, Thoſe of *Francis Willoughby* Eſq; The Whole conſiſting of many curious Diſcoveries and Improvements in the Hiſtory of *Quadrupeds*, *Birds*, *Fiſhes*, *Inſects*, *Plants*, *Foſſils*, *Fountains*, &c. Publiſh'd by Mr. *Derham*, 8*vo.* 1718.

4. Mr. *Ray's* Wiſdom of God manifeſted in the Works of the Creation, in two Parts, *viz.* The Heavenly Bodies, *Elements*, *Meteors*, *Foſſils*, *Vegetables*, *Animals*, *Beaſts*, *Birds*, *Fiſhes*, and *Inſects*; more particularly in the Body of the Earth, its Figure, Motion, and Conſiſtency; and in the admirable Structure of the Bodies of Man, and other Animals; as alſo in their Generation, *&c.* with Anſwers to ſome Objections; the 8th Edition, 8*vo.* 1722.

5. ——— his three Phyſico-Theological Diſcourſes, concerning, 1. The Primitive Chaos, and Creation of the World. 2. The General Deluge, its Cauſes and Effects. 3. The Diſſolution of the World and Future Conflagration; wherein are largely diſcuſſed, the Production and Uſe of Mountains; the Original of Fountains, of Formed Stones, and Sea-Fiſhes Bones and Shells found in the Earth; the Effects of particular Floods, and Inundations of the Sea; the Eruptions of Vulcano's, the Nature and Cauſes of Earthquakes; alſo an Hiſtorical Account

of thoſe two late remarkable ones in *Jamaica* and *England*; with Practical Inferences, illuſtrated with Copper-Plates; the 4th Edition, 8*vo.* 1721.

6. Philoſophical Tranſactions, *N°* 376, for the Months of *March* and *April* 1723, continu'd and publiſh'd by Dr. *Jurin*, Secretary to the *Royal Society*. Where may be had, A complete Sett from the Beginning, in 32 Volumes, and moſt of the Numbers ſeparately.

7. ——— the ſame abridg'd to the Year 1720, by Mr. *Lowthorp* and Mr. *Motte*, in 5 Volumes, 4*to.*

8. *Bibliotheca Literaria*; being a Collection of Inſcriptions, Medals, Diſſertations, *&c.* to be continu'd, *N°* 6. 4*to.* 1723.

9. *Opticks*; or, A Treatiſe of the Reflections, Refractions, Inflections, and Colours of Light; the 3d Edition; by Sir *Iſaac Newton* Knt. 8*vo.* 1721.

10. The Poſthumous Works of Dr. *Robert Hooke*; in which, I. The preſent Deficiency of Natural Philoſophy is diſcourſed of, with the Methods of rendring it more certain and beneficial. II. Of the Nature, Motion, and Effects of Light, particularly that of the Sun and Comets. III. An Hypothetical Explication of Memory; how the Organs made Uſe of by the Mind in its Operation may be mechanically underſtood. IV. An Hypotheſis and Explication of the Cauſe of Gravity, or Gravitation, Magnetiſm, *&c.* V. Diſcourſes of Earthquakes, their Cauſes and Effects, and Hiſtories of ſeveral. To which are annex'd, Phyſical Explications of ſeveral of the Fables in *Ovid*'s Metamorphoſes very different from other Mythologick Interpreters. VI. Lectures for improving Navigation and Aſtronomy, with the Deſcriptions of ſeveral new and uſeful Inſtruments and Contrivances; the Whole full of curious Diſquiſitions and Experiments, illuſtrated with Sculptures. To theſe Diſcourſes is prefix'd the Author's Life. By *Richard Waller*, R. S. Secr. *Folio.*

11. *Pharmacopœia Extemporanea*; or, A Body of Medicines; containing a thouſand Select Preſcripts anſwering moſt Intentions of Cure. To which are added, Uſeful *Scholia*, a Catalogue of Remedies, and a copious Index for the Aſſiſtance of young Phyſicians: The third Edition, with large Additions, by the Author *Tho. Fuller*, M. D. 8*vo.* 1719.

12. The Hiſtory of Cold Bathing, both Ancient and Modern, in two Parts. The firſt by Sir *John Floyer*, of *Litchfield*, Kt. The ſecond treating of the genuine Uſe of Hot and Cold Baths; together with the wonderful Effects of the Bath Water drank hot from the Pump, in decay'd Stomachs, and in moſt Diſeaſes of the Bowels, Livor, and Spleen, *&c.* The fifth Edition, with Additions. By *Edw. Baynard*, M. D. 8*vo.* 1722.

13. Joannis Raii, *Synopſis Methodica Avium & Piſcium*; *Opus Poſthumum, quod vivus recenſuit & perfecit ipſe inſigniſſimus Author*; *in quo multas ſpecies, in ipſius Ornithologiâ & Ichthyologia deſiderata, adjecit: Methodumque ſuam Piſcium Naturæ magis convenientem reddidit, Cum Appendice, & Iconibus.* 1713.

14. *Anthropologia Nova*; or, A New Syſtem of Anatomy, deſcribing the Animal *OEconomy*, and a ſhort *Rationale* of many Diſtempers incident to Human Bodies; illuſtrated with above 80 Figures drawn after the Life. By *James Drake*, M. D. late Fellow of the College of Phyſicians, and R. S. The ſecond Edition corrected; with a *Preface* by *W. Wagſtaffe*, M. D. and Reader of Anatomy at *Surgeons-Hall*, in two Volumes, 8*vo.* 1717.

15. An Eſſay concerning the Knowledge and Cure of moſt Diſeaſes afflicting Human Bodies. To which is annex'd, A ſhort Account of Salivation, and the Uſe of *Mercury*. By *P. Paxton*, M. D. 8*vo.*

# *An* INDEX *to Mr.* ALBIN's *Plates and Descriptions, and Mr.* DERHAM's *Notes upon them.*


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# THE

# DESCRIPTION *of the First* PLATE.

THE CATERPILLER, *a*, is of a pale green, ſpotted with black. It has a yellow Line down the Back; the Belly is of a yelloviſh Colour with fainter Spots. They are found too frequently on *Cabbage* and *Cauliflowers* from *June* to *September*. They feed alſo on *Naſturtium*, *Horſe-Radiſh*, *Scurvy-Graſs*, *Stock Gilly-Flowers*, and I believe on all Plants that have the Creſs Taſte. I took them about the Middle of *September*, and fed them on the *Indian Creſs* till the latter End of the ſame Month: They then tied themſelves up by the Tail, and croſs the Middle, and changed into a *Chryſalis*, marked *b* in the Copper Plate, and ſo continu'd till the Middle of *April*, and then came forth the *Butter-fly* called *Papilio albus vulgaris major*, the great white *Butter-fly*, the Male marked *e f*, the Female *c d*. The Male and Female of all or moſt *Butter-flies* may, beſides other Characteriſticks, be diſtinguiſhed by their *Alve* or Bellies: Here the Belly of the *Male* is lanker and more cylindrical than that of the *Female*, which is bigger in the Middle, and tapering towards each End like a Nine-pin. The *Female* hath commonly two black Spots in each upper Wing, and the *Male*'s Wings only tipped with black. Mr. *Derham* hath obſerved ſome of the *Males* to have one Spot on the upper Side of the upper Wing, and two underneath it; in the *Females* two above, and a ſort of Shade of them only underneath.

'Tis very common, when this CATERPILLER has faſtened itſelf up, inſtead of changing into a *Chryſalis*, to have many ſmall Maggots come out of its Sides, each of which immediately ſpin themſelves up in a Caſe of yellow Silk. Theſe produce a ſmall *Ichneumon Fly*, which is expreſſed in the Copper-Plate at *h*; and ſometimes inſtead of a *Butter-fly*, after the *Chryſalis* has been changed, I have had thirty or forty *Ichneumons* of another kind come out of it, expreſs'd at *f* in Plate N° 3; theſe eat their way out of the *Chryſalis* in ſeveral Places.

In order to preſerve your *Cabbages*, &c. from theſe CATERPILLERS, 'tis worth while to deſtroy their *Chryſalides* in the Winter. They are commonly found under the Copings of Garden-Walls, Pales, or any Place a little ſheltered; and likewiſe their Eggs, which are of a deep yellow Colour, longiſh, elegantly ſtriated, and ſtanding upright. You will commonly find many of them together, and for the moſt part on the under Side of the Leaves. See *Goedart*, *Sect.* 1. *Num.* 7. *Merian. Vol.* 1. *Chap.* 45. *Mouſet*, *p.* 103. *Ray Hiſt. Inſect. p.* 113. *Liſt. in Goed. p.* 16. *Fig.* 7.

# To Her Roy.l Highness
## *The Princess of Wales;*
*this plate is humbly Dedicated by* Eleazar Albin.

E. Albin del. M.l.x Gucht Sculp.

To the Right Honorable

*Sarah Bodville Countess Dow^r. of Radnor*

*this plate is humbly Dedicated by* Eleazar Albin.

*E. Albin del.*

*R. Terrason, Sculp. Londini.*

# THE

# DESCRIPTION *of the Second* PLATE.

THE CATERPILLER *a* in this Plate is Black and Orange-colour on the *Back*, the *Belly* and *Holders* of a pale greeniſh Aſh-colour, with a ſmall black Spot on each Joint; the *Head* and *Fore Feet* of a deep Black. They are commonly found feeding on the *White Thorn* at the latter End of *April*, on which I fed them till the 12th of *May*, at which time one of them tied itſelf up by the *Tail* and croſs the *Middle*, after the Manner of the former, and changed into a *Chryſalis*, marked *b* in the Copper-Plate, of a deep Yellow marked with Black, out of which, the firſt of *June*, came *Papilio Albus Venis nigris*, the white Butter-fly with black Veins. See *Merian, Vol. II. Chap.* 35. *Moff. p.* 103. *Ray Hiſt. Inſect, p.* 115. *n.* 5. *Hoff. Tab.* 10. *Fig.* 14.

The CATERPILLER marked *e* in this Plate is of a green Colour, with ſmall dark Spots on the *Back*; the *Belly* is of a whitiſh Green. I took it on the *Buckthorn* at the latter End of *May*, and fed it on the ſame till the 12th of *June*, at which time it tied itſelf up by the *Tail* and croſs the *Middle* like the other, and changed into an odd-ſhaped *Chryſalis*, *F*, of a green and yellow Colour, as is expreſſed on the upper Part of the *Branch*; out of which, on the 30th of *June*, came *Papilio præcox Sulphurea Singulis alis Singulis maculis*, the *Brimſtone Butter-fly*. See *Johnſt. Inſ. p.* 42. *n.* 1. *Tab.* 5, 6. *Mouſet. p.* 103. *n.* 1. *Ray's Hiſt. Inſects, p.* 112. *Hoef. Tab.* 12. *Fig.* 8.

# THE
# DESCRIPTION *of the Third* PLATE.

THE CATERPILLER *a* in this Plate is black, marked with ſmall Specks of White on the upper Part, and on each Side an indented Stripe of Yellow, with black branched Briſtles round each *Joint*. The other CATERPILLER, *b*, is marked and briſtled as the former, but of a yellow Colour: They feed on *Nettles*. I found them on the 17th of *July* in the Leaves, folded or ſpun together: They ſhelter themſelves after this Manner that they may be ſecured from the too great Heat of the *Sun*, *Rain*, *Birds*, and a ſmall *Ichneumon Fly*, which often hinders their coming to Perfection. I fed them on *Nettles* till the 24th of the ſame Month, at which time the CATERPILLER hanging itſelf up by the *Tail* within the *folded Leaves*, changed into a *Chryſalis*, expreſs'd at *c*, of a Cinereous or Mouſe-Dun-Colour, out of which, on the 6th of *Auguſt*, came a moſt beautiful Fly called *Papillio major Nigricans, alis Maculis rubris & albis pulchræ illuſtratis*, the *Admiral Butter-fly*. I did not perceive any Difference in the Flies that were produced from theſe two CATERPILLERS: Some of their *Chryſalides* ſeemed as if gilded with *burniſh'd Gold*; out of theſe came a Brood of ſmall, but very beautiful *Ichneumons*. See *Goedart, Vol.* 1. *Tab.* 26. *p.* 96. *Fig. opt. Liſt. Fig.* 4. *Gr. V.* 2. *p.* 81. *Tab.* 81. *Fig. opt. Moff.* 100. *num.* 6. *an. Hoef. Tab.* 12. *Fig.* 15. *Mr. Ray Hiſt. Inſect. p.* 126.

TO THE MOST NOBLE

*Mary Osborn Dutchess of Beaufort*

*this Plate is humbly Dedicated by* Elcazar Albin.

E. Albin, adviva in, delineavit,

H. Fratton Sculpsit

TO THE HONORABLE

*Mrs Elizabeth Somersett*

*this plate is humbly Dedicated by* Eleazar Albin.

*E. Albin del.*

*M. V.r Gucht*

# THE

# DESCRIPTION *of the Fourth* PLATE.

THE CATERPILLER *a* is black, and full of ſmall white Specks all over his Body. He is one of the branched prickly kind: Its *Head* is ſhining, and blacker than the other Parts of his *Body*; the *Holders* are of a light Brown. It was taken the 1 th of *June* feeding on the *Nettle*, and on the 20th of the ſame Month it tied itſelf up by the *Tail*, and changed into a *Chryſalis* of a light Green Colour, and on the 6th of *July* came forth a beautiful *Butter-fly* with *Eyes* in his *Wings*, called by Mr. *Pettiver*, in his *Centuria Prima Rariorum Naturæ*, *Papilio Oculus Pavonis dictus*, the Peacock's Eye. This CATERPILLAR, when touched, lets fall from his Mouth a Drop or two of a dark green Liquor, but for what Reaſon I could not judge, it not being hurtful to any part of the Skin where it falls. They are ſubject to the ſame Production of *Ichneumons* as thoſe of Plate N° 3. See *Goed. Vol.* 1. *p.* 23 *Fig. opt.* 1. *Liſt. Fig.* 1. *Graf. Vol.* 1. *Tab.* 26. *pag.* 53 *Ray Hiſt. Inſect p* 122. *n.* 14. *Mouſet*, *p.* 99. *n.* 4 who calls it *Omnium Regina*, the Queen of Butter-flies. See *Hoef. Tab.* 12. *Fig. opt.* 9. *Jonſt. Inſ* 40. *n.* 4. *Tab.* 5.

The CATERPILLER, marked *e* in this Plate, is of an Olive Colour on the Back, edged with a Stripe of Yellow, and a dark ſhining Spot on each Joint. The *Belly* and *Holders* are of a light Hair Colour ſpotted with ſmaller Spots. This CATERPILLER was taken on the 26th of *May* feeding on the *Nettle*, and on the 7th of *June* ſome of them tied themſelves up by the *Tail*, and changed into a *Chryſalis* of a light brown Colour, out of which came, in 14 Days, a *Fly* called *Papilio Teſtudinarius minor*, the leſſer Tortoiſe-ſhell, from its Wings repreſenting the Shell of that *Animal*. This *Butter-fly* lives all Winter, and hides himſelf in *Cottages*, *old Trees*, and other Places of Refuge The *Chryſalides* are often found gilded, from whence it was called *Aurelia* or *Chryſalis*, which is now become the common Name of the Caſes that *Flies* lye while in this State. Theſe produced a Brood of ſmall *Ichneumons*, expreſs'd in the Plate at *i*. See *Goed. Vol.* 1. *p.* 90. *Fig. opt.* 21 *Liſt. fig.* 2. *Graf. Vol.* 1. *p.* 89. *Moff.* 101. *num.* 11. figured againſt *num.* 12. *Hoef. Tab.* 2. *Fig. opt.* 16. *Ray*, *pag.* 117. *n.* 1.

THE

# DESCRIPTION *of the Fifth* PLATE.

THE CATERPILLER *a* is of a light Sea-green Colour. It was taken near *Hornſey*-Wood the 8th of *June* feeding on the *Black-Thorn*, and the 18th of *June* it tyed itſelf up after the Manner of the white *Butter-fly*, and the 16th of *July* came forth the *Hair-ſtreak Butter-fly*. The upper Side of the Wings, marked *b*, are of a dark Brown, with a large Spot of Orange-colour in each upper Wing, and three ſmall Spots of the ſame Colour toward the Bottom of each under Wing. The under Side of the Wings *c* are Orange-colour, with large Streaks of dark Red edged with White, and a Shade of bright Red on the Edges of both the upper and under Wings. This CATERPILLAR is very rare, and ſcarce to be met with.

The CATERPILLER *d* in this Plate is like the former in Colour, with oblique Streaks of a dark Green on the *Sides*. His *Head* is of a yellowiſh Brown. It was taken the 4th of *July* near *New-Croſs* in *Kent*, feeding on the Inſide of the *Black-berry Buds*, making a ſmall Hole by which it entered, and eating all the inward Part, left the *Bud* ſeemingly entire. It fed on them till the 15th of *July*, and then tyed itſelf up after the Manner of the other *Butter-flies*, and changed into a *Chryſalis*, and the 13th of *April* the Year following came forth a *Butter-fly*. The upper Side of the Wings are of a light brown Colour, the under Side of a beautiful Green. I have found no Account of either of theſe *Butter-flies* in any *Author*.

To The Right Hon^BLE
*John Lord Sommers Baron of Eversham &c.*
*this Plate is humbly Dedicated by* Elcazar Albin.

*E. Albin del.*

To the Right Honorable

*Henrietta Somerselt Countess of Suffolk*

*this plate is humbly Dedicated by* Eleazar Albin.

*E. albin. del.*

*H. Terrason. Sculp.*

# THE

# DESCRIPTION *of the Sixth* PLATE.

THIS CATERPILLER is yellowiſh, marked obliquely with Orange-Colour Streaks on the *Back*, which pointing forwards toward the *Belly*, are of a pale Yellow, and then grow darker in Shade, going backwards till it comes to a Purple, then Orange, *&c.* repeated, and ſo on for ſix or ſeven Courſes, the laſt of which ends with an Orange-colour Shagreen *Tail*. His *Feet* and Circle of his *Face* are black, with Spots of the ſame on the Joints of his *Body*. It was taken about the Middle of *July* on the *Jeſſamine* full fed, and went into the Ground the next Day, and changed into a *Chryſalis* of a dark brown red Colour. The *Moth* came forth at the latter End of *October*. There being but one of theſe CATERPILLERS, it could not be determined whether that is the uſual Seaſon, moſt others of the *Horn Tail* Kind lying in the Ground all Winter till *May*. · The Back and upper Wings of the *Moth c* are of a dark Aſh-Colour, ſtreaked with Lines and Marks of Black, deep Oker, and pale Buff-Colours, and all over this like the ſprinkling of fine Flower. The *under Wings* are of a deep Yellow, with two ſcollop-edged Streaks of Black acroſs. The *Body* is of the ſame Colours, with a Diviſion of Grey inclining to Blue in the Middle, with ſix Rings of Black. The *Breaſt*, *Belly*, *upper* and *under Wings* of the under Side of the *Moth d*, are of a browniſh Yellow, ſhaded with a dark brown Colour, as it is expreſs'd in the Copper-Plate. Theſe CATERPILLERS are very rare to be found neither have I found them deſcribed by any Author.

# THE

# DESCRIPTION *of the Seventh* PLATE.

THIS CATERPILLAR is of a yellowiſh Green, the out Circle of the Face of a deep Purple: He had ſeven long pointed Stripes of Purple and White on his Sides obliquely thwarting each Joint, with a Spot of deep Orange under each: The Horn on his Tail is yellow, tipt with Black. It was found the 4th of *Auguſt* on the *Lilac*, very large (they alſo feed on *Privet*, *Holly* and *Phillyrea*;) it went into the Ground the 8th of *Auguſt*, and in five Days changed into a *Chryſalis*, having firſt changed its Skin, which I have obſerved them to do four times in their Courſe from the Egg to the *Chryſalis*. It remained in that State all Winter till the 26th of *June*, at which Time came forth the Moth expreſſed at *c* and *d*, commonly called the *Privet Hawk-Moth*. The upper Wings are of a light Brown with dark Shades, having a Croſs and ſeveral Lines of Black in each. The Body was of a light Brown, marked on each Side with Roſe-colour and Black alternately. The under Wings are of a pale Roſe-colour, with croſs Stripes of Black. The Eggs are of a pale green Colour; they hatch in a few Days after they are laid. I had one that laid about ſixty Eggs, which came all to Perfection. From one of theſe CATERPILLARS taken in the Fields was produced a very large *Ichneumon*, the Body and Tip of the Tail were Black, the Legs and other Parts of a deep Yellow, the Wings and Horns tipped with a Shade of Black. We eaſily find theſe and moſt other large CATERPILLARS by ſeeing their Dung under the Tree or Buſh on which they feed. See *Ray's Hiſt. Inſect. p.* 144. *n.* 1. *Mouſet, p.* 91. *n.* 5. *p.* 182. *ch.* 2. deſcribes the CATERPILLAR; ſo doth Mr. *Ray, p.* 145.

To the Right Honorable
*Ann Somerset Countess Dow.r of Coventry*
*this plate is humbly Dedicated by* Eleazar Albin.

*E. Albin del.*

*H. Fenton Sculp. London 1714.*

# To the Honorable

*Mary Somerset now Mrs Grevile*

*this plate is humbly Dedicated by* Eleazar Albin.

*E. Albin del*

*H. Scourfield Sculp. London*

# THE

# DESCRIPTION *of the Eighth* PLATE.

THE CATERPILLAR *a* is of a yellowiſh Green, with oblique yellow Stripes on his Sides, ſpotted with a double Row of crimſon Spots; the *Holders* and *Feet* of the ſame Colour of the Spots, the *Horn* in his *Tail* blueiſh. It was taken the 23d of *Auguſt* on the *Dutch Willow*, in the Marſhes near *Rotherhith*: I fed them till the 7th of *September*, at which time ſome of them went into the Earth which I had purpoſely put at the Bottom of the Box in which I kept them, and changed into a *Chryſalis* expreſſed at *c*. (Some of theſe ſpotted CATERPILARS that were taken the 21ſt of *Auguſt* 1714, remained alive in the *Chryſalis* till the 4th of *May* 1716.) And Mr. *Derham* hath obſerved, not only thoſe of the *Butterfly* and *Moth* Kind, but many other Tribes alſo, to lye long in their *Chryſalis* State, when kept in Boxes, *&c*. and ſo are deprived of their natural way of Hatching; ſome of which have lain two Years and more before they have broken Priſon and flown abroad, and ſome have in that time been dried up in their *Chryſalides*, and others that have arrived to their mature Inſect State, not being able to make their way out, have periſhed in their Caſes.

The Cauſe of all this is, no Doubt, the want of thoſe kindly Impregnations, Humectations, and Nutriment they meet with in the more natural Beds they make themſelves in the Earth or open Air, to which the great Author of Nature hath ſo admirably adapted the Bodies of thoſe little Creatures, that no Weather, no not the ſevereſt Froſts, can hurt them. Of this many Examples might be given in almoſt every Tribe; but that of Dr. *Liſter*, in his Note on *Goedart*'s 26th, ſhall ſuffice, who ſaith, That *in the Middle of Winter he hath found both Caterpillars and Hexapod. Maggots on the Snow, which were ſo frozen, that they would rattle in a Glaſs like Stones; but being thawed and warmed, would creep briskly about, and try to make their Eſcape.*

The CATERPILLAR *b* is of a blueiſh green Colour with yellow Stripes, except that next his *Tail*, which was white, edged with a ſmall Row of black Spots, it had a ſmall crimſon Circle on each Joint: His *Feet*, *Holders*, and *Circle* of the *Face* were of the ſame Colour as the *Body*. It was taken the 16th of *July* on the *Willow-Tree*, on which it fed till the 27th of the ſame Month, at which time ſome of them went into the Earth, and changed into a *Chryſalis*, and the 5th Day of *May* the Year following came forth a moſt beautiful *Moth* with Eyes in its under Wings; 'tis commonly called the *Eyed Hawk-Moth*. One of theſe CATERPILLARS, before its time of Change, had ſeveral Maggots come out of his Sides, which ſpun themſelves Caſes of a brown ſilky Subſtance, and the Summer following produced ſmall *Ichneumon Flies*: The CATERPILLAR lived ſix Days after the Eruption of the Maggots without eating. See *Liſter's Goedart, n.* 24. *Merian, Vol.* 2. *Chap.* 37. *Ray, pag.* 148. *n.* 2. *Mouſet, p.* 91. *n.* 6.

# THE
# DESCRIPTION *of the Ninth* PLATE.

THE CATERPILLAR *a* is greeniſh, ſpotted with Black, having two Spots like Eyes on each Side the Body near the Head; the Horn on the *Tail* was tipt with Black: When he is diſturbed, or has done Feeding, he draws in his Head like a Tortoiſe.

The CATERPILLAR *b* is of a dark Brown, with Rings and Streaks of a lighter Colour, the *Horn* on his *Tail* tipt with Yellow, in every thing elſe like the Former. They were found the 26th of *June* on the *white Lady's Bedſtraw* in the Marſhes, on which I fed them till the 7th of *July*, at which time ſome of them ſpun themſelves up in the Leaves of the *Bedſtraw*, and changed into a *Chryſalis*, and the 15th of *April* following came a moſt beautiful *Moth* of an Olive-green and Roſe Colour, prettily intermix'd on both Sides. One of theſe CATERPILLARS being fly-blow'd the Spring following, came forth an *Ichneumon*, expreſſed at *g*, whoſe Body was Black, and ſpotted with reddiſh Brown. I obſerved ſomething in this CATERPILLAR very remarkable, *viz.* his Dexterity in Swimming; for commonly Feeding in or near the Water, if at any time he happens to fall in, he turns himſelf on his Back, and ſwims with his Head and Tail turned together till he gets Hold on ſome Part of the Plant, by which he helps himſelf up again. The CATERPILLAR *b* I take to be *Goedart's* 26th, which he calls *the Elephant*. See alſo *Ray's Hiſt. Inſects, p.* 145. *n.* 2.

TO THE MOST NOBLE

*Mary Dutchess of Ormond*

*this plate is humbly dedicated by* Eleazar Albin.

E. Albin del. E. Sension, Sculp. London, 1732.

To the Right Honorable
*Charlotte Herbert Vicountess Windsor*
*this plate is humbly Dedicated by* Eleazar Albin.

*E. Albin del.*

*N. Tarasson sculp. London.*

# THE

# DESCRIPTION *of the Tenth* PLATE.

THIS CATERPILLAR is of a blueiſh Green, full of white riſing Specks: It has yellow Stripes on his Sides, the hindermoſt of which extending to the under Part of the *Horn* on its *Tail*, ends there in Orange-colour, having a Circle of the ſame Colour juſt below it. (I have likewiſe found ſome of them with two Rows of Crimſon Spots on their Sides, and of a yellowiſh green Colour, like the CATERPILLAR *a* in Plate the 8th.) This was taken the 17th of *July* on the *Lime-Tree*, on which I fed it ſeveral Days. Before it changed into a *Chryſalis*, it turned purpleiſh on its *Back*, and the *Belly* pale Liver-colour; the *Horn* on his *Tail* of a deep Blue, the Orange-colour and white Specks remaining very pale. It went into the Earth the 22d Day of *July*, and changed into an *Aurelia* or *Chryſalis*, and remained in that State till the 15th of *April*, the Year following, then came forth a beautiful ſcolop'd-wing'd *Moth*, having a curious Mixture of Olive-green and Peach-colours in his Body and Wings: Their Eggs are of an oval Shape, and green Colour. I never found theſe CATERPILLARS ſo numerous, as to hurt the Trees. This CATERPILLAR ſeems to be more like *Goedart*'s 25th, than that in Tab. 7: He ſaith the *Horn* in its *Tail* is poiſonous, and that it defends it ſelf therewith as with a Sting: I have obſerved ſeveral of theſe Tribes, and others that have not theſe Horns or Bunches, to ſhake or turn themſelves when any *Fly* or *Ichneumon* ſettles on them. See *Merian*, *Vol.* 2. *chap.* 24.

# THE
# DESCRIPTION *of the Eleventh* PLATE.

THIS CATERPILLAR hath the *Belly* and *Sides* of a yellowiſh Green, with a ſmall white Spot on each Joint; the *Back* is of a blueiſh Green ſpecked with White, and is parted from the yellow Green by a white Streak continued from the black Spots (repreſenting Eyes) to the purple Gibboſity on the *Back*, from thence paſſing obliquely down the Sides to the firſt Pair of Holders, where it is interrupted by a deep Purple, and riſes again about the ſecond Holders, and ends at the forked Tail. From the purple Gibboſity on the *Back* and purple Interruption on the *Side*, a Shade of Purple is continued all along the upper Part of this white Streak. It has a deep purple Streak on each Side the *Belly*. There are ſometimes white Circles and purple Spots on their *Sides*, which ſeem to be accidental, for in all I have ſeen they have varied. The out Circle of the *Face* is of a bright Yellow, the ſecond of a deep Roſe-colour, the third Black, and the middle of a Peach-colour. His *Head* (like that of a Tortoiſe) was put forth and drawn in at Pleaſure. The *Fore-feet* were of an Aſh-colour, as was alſo the *forked Tail*, and ſpeckled with Black. When it is diſturbed, it thruſts out of its Fork two ſcarlet Tips or Points, in an angry Manner, as a Defence, but I could not perceive they were hurtful; having ſeveral times applied my Hand to them, I found them ſoft, and the CATERPILLAR protrudes or retracts them as he pleaſes with great Facility. Theſe CATERPILLARS are found on the *Willow* and *Popler* Trees from the latter End of *June* to the Middle of *Auguſt*. In four or five Days after I had taken them, they made themſelves, by gnawing the Wood of the Box into ſmall Bits like Saw-duſt, a hard Caſe, working it with a glutinous Matter which their Bodies afford, as it is expreſſed at *b*, in which it changed into a *Chryſalis*, marked *e*. The *Moth* came forth in *May*; *d* repreſents the upper, and *e* the under Sides of it, being of an Aſh-colonr, ſtriped and ſpotted with Shades of Black. The *Eggs*, marked *f*, are of a pale Liver-colour, their under Side flat, and the upper Side riſing in a conick Figure. I obſerving ſeveral of theſe CATERPILLARS to have Eggs or Fly-blows ſticking on them, I plucked them off from ſome, and left them on others, to ſee the Event: The firſt produced *Moths*, the others *Maggots*, which ſtick faſt to the CATERPILLARS by their Tails, which are in ſhining Caſes about one fifth Part of their Length. They pierce his *Body* with their *Proboſcis*, which is ſmall and ſharp, thereby ſucking their Nutriment from him. I plucked ſome of their *Proboſcis* out of him, they ſtill remaining faſt by their Tails in the Caſes, and they after ſome time penetrated him as before. Theſe *Maggots* made themſelves Caſes of an earthly Colour, expreſſed at *g*, and in *May* the Year following produced the *Ichneumon* expreſſed at *h*, being of a light brown Colour. See *Liſter's Goedart*, *n.* 20. *Mouſet*, *p.* 183. who calls the CATERPILLAR *Eruca Vinula*: *i. e.* the *Beau*; ſo doth Mr. *Ray* from him, *pag.* 153, where both the *Moth* and *Caterpillar* are well deſcribed.

To the most Noble
*Mary Capell Dutchess Dow.r of Beaufort*
*this plate is humbly Dedicated by* Eleazar Albin.

*E. Albin delin.*

*H. Terasson Sculp. 1714.*

# To the most Noble
## Mary Dutchess Dow.r of Bedford
this plate is humbly Dedicated by Eleazar Albin.

E. Albin del.

H. Terasson Sculp. London.

# THE

# DESCRIPTION *of the Twelfth* PLATE.

THE CATERPILLAR (commonly known by the Name of the *Silk-worm*) is of a pale Cream-colour inclining to White, with ſmall dark Circles on each Joint, and two half Circles on his Back. They are hatcht from Eggs of the preceding Year in *May*, and being put on convenient Boards, are placed in an airy and temperate Room, and fed twice a Day with freſh *Mulberry* Leaves. *N. B.* If the *Mulberry* Leaves are not put forth, you may feed them at firſt on *Lettice* or *Succory* Leaves. They muſt be kept very clean and dry; ſome rub the Boards on which they lay them with *Wormwood*, and ſprinkle it with *Wine*, and then dry them well before they put them on again. Notwithſtanding this Care, they are ſubject to ſeveral Diſeaſes, which often obliges ſuch as keep them to remove them for Change of Air, and ſometimes to perfume the Room with Incenſe, Benjamin, and Vinegar. They are to be defended alſo from *Cats*, *Birds*, *Ants*, and *Flies*; they ſuffer likewiſe by *Lightning*, *Thunder*, or any harſh Sound. They feed about 40 Days, during which time they change their *Skin* four times, not eating for ſome time before each Change. When their time of Spinning draws nigh, which is known by their being tranſparent and reſtleſs, they are put in little Coffins of Paper, rouled up like a Wafer, and pinned up againſt a Wall, or Hangings of a Room. *N. B.* In *Spain* and *Naples* they put Branches of *Vines* and *Birch-Trees* dried for them to ſpin up in. After its Change into a *Chryſalis*, it lyes about 15 Days before the *Moth* comes out, which is repreſented in the Copper-plate at *de*, being of the ſame Colour with the CATERPILAR, the *Male* having a leſſer Body and broader *Horns* than the *Female*, as moſt of the *Moths* of the *Male kind* have. After they have purged themſelves, they couple and lay *Eggs*, every *Female* laying near 160, which are firſt Yellow, and after of a Liver-colour. Mr. *Derham* makes Mention, in his *Phyſico-Theology*, pag. 388, of an ingenious *Gentlewoman* who had the Curioſity to meaſure the *Silk* that compleated one of their *Caſes*, which was found to be above 300 Yards, and weighed but 2 Grains. If you have not time to winde them off preſently after the *Caſes* are compleated, put them in an Oven after the Bread is drawn, letting them ſtand ſome time: This kills the *Moth*, which would elſe eat her way out, and ſpoil the *Silk*; you may then keep them as long as you pleaſe. See *Philoſ. Confer. of the Virtuoſ. of France*, *Vol.* 2. *p.* 402. *Goedart*, *p.* 1. *Tab.* 42. *Merian*, *Vol.* 1. *p.* 1. *Malpighi de Bombyce.*

THE

# Deſcription *of the Thirteenth* PLATE.

THE CATERPILLAR *a* is of a pale Blue, having 3 ſquare ſpots of Yellow on each *Joint*, and on each of them 4 ſmall black Spots; it hath 2 large Spots of Black on the *Head*, repreſenting *Eyes*. It was taken the 22d of *May* on the *Black Thorn*; it likewiſe feeds on the *White Thorn*, *Bramble*, and *Crabtree*. The 27th of *May* it ſpun it ſelf up in a *Caſe b* on a Branch of its Food, in which it changed into a *Chryſalis c*. The 26th of *Auguſt* came forth the *Moth*, the upper ſide *d* Brown and Aſh-colour'd, with a double Spot of a Yellowiſh White like a Figure of Eight in each Upper Wing; the under ſide of the *Moth e* is of a light Hair Colour.

The CATERPILLAR *f* is White, and ſpotted with Black and Yellow all over the *Body*, *Feet* and *Holders*; the *Head* Yellow ſpotted with Black. It was taken on the 20th of *May* feeding on the *Water Betony*; it alſo feeds on the *Mullein*. The 30th of *May* it went into the Earth, which I had provided at the bottom of the Box, in which I fed it; and made a hard *Caſe*, expreſſed at *g*, of the Earth and a Webby Matter near a quarter of an Inch thick, to ſecure it ſelf from the Injuries of the Weather, *&c.* In this *Caſe* it changed into a *Chryſalis h* of a Tawny red Colour, and at the beginning of *March* following came forth the *Moth*, *i*, of a Buff Colour ſhadowed with dark Brown. Some of theſe CATERPILLARS were Flyblown, each of which produced 5 or 6 dark red *Chryſalides l*, from each of them came the *Fly* expreſt at *m*. See *Ray's Hiſt. Inſects p.* 168. *n.* 25.

# To the Right Honorable
## *The Lord Bruce.*

*this plate is humbly Dedicated by* Eleazar Albin

E. Albin del.

H. Terasson Sculp. London. 1714.

# To the most Noble
## Henry Duke of Beaufort
this plate is humbly Dedicated by Eleazar Albin.

E. Albin del.

H. Fourdrinier Sculp. London. 1734.

THE

# Deſcription *of the Fourteenth* PLATE.

THE two CATERPILLARS *a a* are of the ſame Species, altho' of different Colours, the uppermoſt of which was of a reddiſh Colour intermixt with Green and darker Shades, the lowermoſt was Green and Clouded like the former but without any Red; they were both ſpotted with White Specks, circled with Black all over their Bodies, and had two Riſings or Bunches at the *Tail*. I always found them in the Poſture they are drawn in, cloſe to the Stem, except when feeding. They were taken the 17th of *May* feeding on the *White Thorn*; they alſo feed on the *Black Thorn* and the *Crab-Tree*. The 22d of the ſame Month they went into the Earth in the bottom of the Box, and changed into a *Chryſalis* of a reddiſh Brown Colour expreſſed at *b*, and about the middle of *September* came forth the *Moth c*: the *Upper Wings* were a mixture of reddiſh Brown and Buff Colours and over all Lines of a light Green; the *Under Wings* and *under Side d* were of a pale Ruſſet Colour.

The CATERPILLAR *e* is of a reddiſh Purple Colour, with Blue Spots and ſmall Black Circles on each *Joint*, it had 2 *Riſings* on the middle of its *Back*, and one at the Tail, with 2 large Spots of Orange-colour below it: It always ſtood in the Poſture figured in the Plate, with its hinder part lifted up from the *Branch*, except when moving or feeding. This CATERPILLAR was taken the 9th of *July* feeding on the *Dutch Willow* in the *Marſhes* near *Rotherhithe*. Before its change the riſings on the Back and Tail fell in, and the whole Body turned blackiſh: It ſpun it ſelf up in the *Leaves*, I had *another* which buried it ſelf in the *Earth* in the ſame Box. They both changed into *Chryſalides* as *f* expreſſes, towards the middle of *July*; and the beginning of *Auguſt* came forth the *Moth g* of a light Brown Colour heightned with White, and Streaked with lines of Black. *Godartius* ſeems to deſcribe the firſt of theſe *n.* 23. and the latter *n.* 22. and calls it *the terrible Eruca*; the riſings on the Back he ſaith are a Guard to defend himſelf. See *Liſter*'s *Godart n.* 21.

# THE

# Deſcription *of the Fifteenth* PLATE.

THE CATERPILLAR *a* hath its *Head* and *Back* of a light brown Colour, the *Belly* of a light Hair Colour, parted from the brown by an indented Line of Black, edged with White. It was taken feeding on a *Peach-tree*, in a Garden at *Hackney*, the 21ſt of *May*; and the 25th of the ſame Month it went into the *Earth in the Box*, and changed into a *Chryſalis b*; and at the latter end of *June* came forth the *Moth* expreſſed at *c*, the *upper ſide* brown, with lines and circles of White in the upper Wings, the *under ſide d* of the ſame Colour, with a border of light Hair Colour, divided in the middle by an Ingrail'd line of Black. This CATERPILLAR I have rarely found.

The CATERPILLAR *e* is of deep Tawney, with a row of *Chevron-like* black Streaks all along the *Back*, the Angles pointing towards the *Tail*, with ſome dark Spots on its *ſides*. It was taken on the *Oak* the 14th of *June* near *Dulwich*; ſome of the ſame have been taken alſo near *Woolwich* in *Kent*, others in *Canewood* near *Hamſtead*. It went into the Earth the 24th of *June*, and changed into a *Chryſalis f*; and about the middle of *Auguſt* came forth a beautiful *Moth*, expreſſed at *g*, the Back and upper Wings of a deep Orange Colour, the *Belly* and under Wings of a Cream Colour, with faint Shades of Orange and Streaks of Roſe Colour.

To the Right Honorable
*Thomas L^d. Trevor*
*Lord Cheif Justice of His Majesties Court of Comon pleas*
*this plate is humbly Dedicated by* Eleazar Albin.

TO THE MOST NOBLE

*Mary Preston Dutchess of Powis*

*this plate is humbly dedicated* by Eleazar Albin.

*E. Albin del.*

*H. Fenwick Sculp. 1713*

THE

# Deſcription *of the Sixteenth* PLATE.

THE CATERPILLAR *a* is of a dark Purple Colour with a mixture of Red and Brown, it hath 4 Blue Spots on its *Back* near the *Head*, it had *Flaps* or *Lappets* on every *Joint*, which makes him appear to have ſo many *Feet*. It was taken on the *Alaternus* about the middle of *May*; it alſo feeds on the *Lauruſtinus*, *Black Thorn*, *White Thorn*, and *Bramble*. On the 28th of *May* it ſpun it ſelf up in the Leaves in a Greyiſh Silkey *Web* as *b* expreſſes, and Changed into a *Chryſalis c* almoſt of the Colour of the CATERPILLAR, and on the 21ſt of *July* came forth the *Moth d* of a reddiſh Colour with three Ingrailed lines of Black acroſs the *Upper Wings*, and two of the ſame in the *Under Wings*; the under ſide of the *Moth* is of the ſame Colours: the *Eggs* are White and ſtreaked with dark Green: the young CATERPILLARS live all the Winter. I have fed them on the *Bramble* till the latter end of *April*, and then given them *White Thorn* and *Black Thorn* to feed on, and brought them up till their Change. The *Moth* in its ſitting Poſture is repreſented at *e*, which is particular to this kind of *Moth*.

TO THE MOST NOBLE

*Mary Preston Dutchess of Powis*

*this plate is humbly dedicated* by Eleazar Albin.

*E. Albin del.* *H. Fenn sculp.* 1713

THE

# Deſcription *of the Sixteenth* PLATE.

THE CATERPILLAR *a* is of a dark Purple Colour with a mixture of Red and Brown, it hath 4 Blue Spots on its *Back* near the *Head*, it had *Flaps* or *Lappets* on every *Joint*, which makes him appear to have ſo many *Feet*. It was taken on the *Alaternus* about the middle of *May*; it alſo feeds on the *Lauruſtinus*, *Black Thorn*, *White Thorn*, and *Bramble*. On the 28th of *May* it ſpun it ſelf up in the Leaves in a Greyiſh Silkey *Web* as *b* expreſſes, and Changed into a *Chryſalis c* almoſt of the Colour of the CATERPILLAR, and on the 21ſt of *July* came forth the *Moth d* of a reddiſh Colour with three Ingrailed lines of Black acroſs the *Upper Wings*, and two of the ſame in the *Under Wings*; the under ſide of the *Moth* is of the ſame Colours: the *Eggs* are White and ſtreaked with dark Green: the young CATERPILLARS live all the Winter. I have fed them on the *Bramble* till the latter end of *April*, and then given them *White Thorn* and *Black Thorn* to feed on, and brought them up till their Change. The *Moth* in its ſitting Poſture is repreſented at *e*, which is particular to this kind of *Moth*.

THE

# Deſcription *of the Seventeenth* PLATE.

THE CATERPILLAR *a* is of a light Brown Colour, ſpotted with Black and Orange, the Head of a Pale Buff, it had a broad ſtripe of White between each Joint on the ſides. It was found at the beginning of *May* feeding on Graſs, and at the latter End of the ſame *Month* it ſpun it ſelf up in a *Web* expreſſed at *b* like Whited-brown Paper, on the Stalks of the *Graſs*, and changed into a *Chryſalis c*, about the latter End of *June* came forth the *Moth*, the *Male* repreſented at *d* is of a Browniſh Colour with two White Spots, and a line of a deeper Colour from the tip to the middle of the Inſide of the *Upper Wings*, the *Horns* are large and Feather'd, as are thoſe of the *Males* of many other Species; the *Female f* is of a Yellowiſh Buff, with the ſame marks in the *Wings* as the former. I open'd one of theſe CATERPILLARS which died without Spinning or changing, and found it had been *Flyblown*, for in it were Six large *Chryſalides*, expreſt at *h*, from each of which came forth a *Fly*, as in the Plate at *i*. Two of the *Moths* within a few Days after their Change coupled, and the *Female* laid *Eggs* of a flattiſh round form, and Whitiſh Colour, with a circle and ſpot of Green on each. They hatched towards the latter end of *July*, and the CATERPILLARS lived all Winter. I have found them in the Fields in *October* and *November*, under *Hedges* and ſhelter'd places, about the bottom of the *Stalks of Graſs*. This CATERPILLAR is the ſame with that in *Liſter*'s *Godart*, *n.* 82, who ſaith, *it is a thirſty Animal, and drinks by dipping its Head in the Water, and then lifting it up as Hens do, which it repeats over and over again, for which reaſon it bears the Name of* the Drinker. *See alſo Ray Hiſt. Inſect. p.* 142. *n.* 3.

*N. B.* I have never obſerved this, though I have brought up many.

TO THE MOST NOBLE

*Mary Sherburn Dutchess of Norfolk*

*this plate is humbly Dedicated by* Elcazar Albin.

# To the Most Noble
## Henrietta Somerset Dutchess of Grafton
this plate is humbly Dedicated by Eleazar Albin.

E. Albin del.

H. Terraston, Sculp. London.

THE

# Deſcription *of the Eighteenth* PLATE.

THE CATERPILLAR *a* is ſpotted on the *Sides* with White, the Openings between the *Joints* of the *Back* are like Black Velvet; the other parts of its *Body* Brown. It was taken on the *White Thorn* at the beginning of *May*; and about the 10th of *June*, it ſpun it ſelf, in the *Leaves*, *a britle brown Caſe b*, in form of an *Egg*, like CATERPILLAR *a* in the next Plate; (*for which reaſon they are called by ſome the great and ſmall Egger*,) in the aforeſaid *Caſe* it changed into a *Chryſalis* as is expreſt at *c*, and at the latter end of *June* came forth the *Moth*; the *Body* and *Wings* of the *Male d* are of a Brown Colour towards the Shoulders, the lower part of both *Wings* are of a lighter Brown with a ſtripe of Yellow in the middle, between the Shades, and a ſpot of White in each *Upper Wing*; the *Female f* is of a pale Tawny with the ſame degrees of Shades, and the like ſpots as the *Male*. Theſe *Moths* coupled, and laid Eggs of an Oval form, and ſpotted like thoſe of a *Turkey*. They hatched at the latter end of *July*, and lived with me all the Winter. I fed them firſt on *White Thorn* and *Black Thorn*, when theſe failed on *Bramble*, the Leaves of which are to be found all Winter; and in the Spring following I gave them their Liberty, knowing their Change. See *Godart p.* 1 *Tab.* 7. *Liſter's Godart n.* 88. *Marian Vol.* 1. *Chap* 10. *Mouſet p.* 92. *n.* 9. *Ray's Hiſt. Inſect. p.* 142. *n.* 2. who calls it *Phalæna maxima fulva, alarum Exteriorum ſuperiore medietate intenſius colorata, cum maculâ in medio alba, inferiore dilutiore.*

THE

# Deſcription *of the Nineteenth* PLATE.

THE CATERPILLAR *a* is Black, with two rows of Brown Spots encompaſſed with Yellow on his *Back*, the *Head* is of a Browniſh Aſh Colour; the *Feet* Black,and the *Holders* Red. It was taken on the 17th of *June* on the Black Thorn, and the 12th of *July* it ſpun it ſelf up in the Leaves, a brown hard brittle *Caſe* in ſhape like a *Birds Egg*, (after the manner of the CATERPILLAR in the Eighteenth Plate,) and changed into a *Chryſalis* expreſſed at *b*, out of which came forth the *Moth c*, the *Body* and *Upper Wings* of a pale reddiſh Brown, with two White Spots, and a line of the ſame acroſs each Upper *Wing*; the under ſide *d* had the ſame marks,but ſomething paler. Theſe CATERPILLARS are always found in Colonies, the whole Neſt of them feeding together, till they are ready to change; as ſoon as they are hatched from *Eggs* they ſpin a *Web* to ſhelter themſelves from the Weather, and as they grow enlarge it with ſeveral Diviſions; they ſeldom go from the Plant they are firſt hatched on, till they have eaten it quite bare, and want food; when they go abroad to feed, they ordinarily ſpin a Thread from their main Web to guide them home again; this is very particular, and ſeems neceſſary to them; for I cou'd never feed them up without taking the whole Neſt with their Web.

The CATERPILLAR expreſſed at *e* is ſtriped with Blue and Orange Colour on his *ſides*, and a White Stripe down the *Back* reſembling a laced Livery, from whence it's commonly call'd the Lacquey, the *Head* Blue with two Spots in Imitation of *Eyes*, it has ſmall Tufts of Hair on each *Joint*. It was taken the 30th of *May* on the *Black Thorn*, and the 20th of *June* it ſpun it ſelf up in a Yellowiſh Silky Web (from which when torn fell a Yellow Powder like Flower of Brimſtone) and changed into a *Chryſalis f*, and the 25th of *July* came forth the *Moth g* of a Tawney Fleſh Colour,having a Diviſion of one 3d of the middle of the Upper Wings of a darker Colour. The *Moth* lays her *Eggs* in a Spiral Order, round the young Twigs of ſuch *Trees* as are proper food for the CATERPILLARS which are not very nice, for they eat the Leaves of any *Fruit Trees*, *White Thorn*, *Black Thorn*, *Bramble*, *Lawrel*, and ſeveral others; they are Hatched in the Spring, when the young Leaves come forth, and keep together in a Web while young, ſo are eaſily deſtroyed, if care be taken then. Some of them were Flyblow'd, and produc'd the *Maggot* expreſſed at *k*, which changed into the *Chryſalis l*, from which came the *Fly m*. See *Godart. p.* 1. *Tab.* 10.

To the Right Honorable.
*The Dow.r Ladu Gerrard*
*this plate is humbly Dedicated by* Eleazar Albin.

E. Albin del.

H. Ingersoon. Sculpsit London, 1713.

To the Lady Drake Wife of Sam.l Trotman Esq.r

E. Albin del. this plate is humbly Dedicated by Eleazar Albin.

THE

# Deſcription *of the Twentieth* PLATE.

THE CATERPILLAR *a* is Black, the Hair on the two *Joints* next the *Head* and on the Sides Orange Colour, and on the Back Black. It hath a Row of ſmall White Spots, reſembling Pearl, on each *Joint*. When any thing diſturbs it, it rowls it ſelf up like *Hedg-hog*, and lieth in that Poſture while apprehenſive of danger; afterwards haſtens from that place. It was taken in the beginning of *May* feeding on the *Plum-Tree*; they likewiſe feed on the *Currant-Tree*, *Nettles*, *Teaſel*, *Lettice*, *Chickweed* and many other Plants; it ſpun it ſelf up to the ſide of the Box in a thin Grayiſh *Web* the 10th of *June*, and changed into a black *Chryſalis* the 17th of the ſame *Month*, and the 3d of *July* came forth a Beautiful *Moth*, *c*, the *Body* and *Upper Wings* of which are dark Brown, divided by ſeveral broad Streaks of White; the *Belly* and *Under Wings* Red, ſpotted with Black, the under ſide of the *Moth d* of the ſame Colours, but paler: The young CATERPILLARS are hatched in Autumn, and live all Winter. I took ſome of them which were Flyblow'd, the *Maggots* eating their way out of their *Sides*, ſpun themſelves *Caſes* of Yellow Silk, and produced the *Ichneumon* expreſſed at *f*... See *Liſter's Godart. n.* 99. *Mouſet* 15. *p.* 93. and the CATERPILLAR his 2d *p.* 186. See alſo *Ray's Hiſt. Inſects p.* 151. *n.* 3. and *p.* 152. *n.* 7. alſo *Marian, Vol.* 1. *ch.* 5.

# THE

## DESCRIPTION *of the Twenty Firſt* PLATE.

THE MOTH whoſe *Upper ſide* is repreſented at *c*, and *Under ſide* at *d*, was brought me in *June*. It laid *Eggs* like ſmall Pearls, which towards the latter end of the ſame Month produced *Hairy blackiſh* CATERPILLARS, with ſmall Brown Spots on each *Joint*, their *Heads*, *Feet* and *Holders* Crimſon. I fed them upon *Bramble*, *Black-thorn*, *Burdock*, *Nettles*, and *Chickweed*; they liv'd thorough the Winter, and about the beginning of *May* ſpun themſelves up in a thin *Web*, and chang'd into a *Chryſalis b*, and on the 20th of *May* came forth the *Moth*, whoſe *Upper Wings* and *Body* were Black, with large Cream Colour Spots, the *Under Wings* are Orange Colour ſpotted with Black; the under ſide of both were of the ſame Colours. The *Belly* Black edg'd with Scarlet. See *Marian Vol.* 1. *Ch.* 6.

The CATERPILLAR *e* is of a dark Brown Colour with Black Spots, and a ſmall Yellow Spot on each *Joint*, the *Head* and *Feet* Black, the *Holders* edg'd with Red. It was taken the 8th of *Auguſt* feeding on *Water-Mint*; it alſo feeds on the *Dutch Willow*, *White Ladies Bed Straw*, and ſeveral other *Plants* that grow near the *Water*. The 12th of the ſame Month, one of them went into the Ground and chang'd into a very Black *Chryſalis* with ſmall Black Spots on the *Sides*, and the 23d of *May* following came a White *Moth* with ſmall Black Spots on its *Wings*, the upper part of the *Belly* Orange Colour ſpotted with Black. I was ſurpriz'd to ſee a CATERPILLAR and *Chryſalis* both ſo Black produce a Moth ſo very White.

TO THE R^T. HON.^BLE

# Henry Bentinck, Earl of PORTLAND

this plate is humbly Dedicated by Elcazar Albin.

E. Albin del.

H. Terasson Sculp. 1717.

TO THE MOST NOBLE

*Bridget Hide Dutchess of Leeds*

*this plate is humbly Dedicated by* Eleazar Albin.

*E. Albin del.* *H. Terasbon, Sculp. London*

# THE

## DESCRIPTION *of the Twenty Second* PLATE.

THE CATERPILLAR *a* is mark'd with indented Streaks of Black and Yellow, with Rings and Spots of the ſame Colour on each *Joint*, the *Head* and *Feet* of a deep Black, the *Holders* of a browniſh Red. It was taken the 14th of *April* feeding on *Hounds-Tongue*; and the 7th of *May* it went into the *Ground* and chang'd into a *Chryſalis*; and the 3d of *June* came forth a very beautiful *Moth*, the *Back* and *Upper Wings c* of a dark ſhining Green ſpotted with White and Yellow, the upper part of the *Belly* red with a Black Stripe down the middle, the *Under Wings* red ſpotted with Black, the *under ſide d*, the *Breaſts* and *Belly* Black, the *Wings* of the ſame Colour with the *upper ſide*. Theſe CATERPILLARS being at full growth ſo early in the Year, makes me believe they live all the Winter, as ſeveral others do. See *Marian*, *Vol.* 2. *ch.* 8.

The CATERPILLAR *e*, is of a Brown Colour, with a Yellow indented Stripe on each *ſide*, and a Spot of Red, with a ſmall Speck of White on it, on each *Joint*; the *Back* is very elegantly mark'd with oblong Spots of White and Red, the *Head*, *Feet* and *Holders* are of a Pale Reddiſh Brown. They were taken the 24th of *Auguſt* on the *Knot Graſs*; they likewiſe feed on the *Bramble*. Some of them ſpun up againſt the ſide of the *Box* the 29th of *Auguſt*, mixing their *Hair* in the *Web*, and the 12th of *May* following came forth the *Moth*; the *Back* and *Upper Wings* of a light Hair Colour with Shades and Lines of Black, the *Under Wings* and *under ſide* of the whole *Moth* are of a Paler Colour.

# THE
# DESCRIPTION *of the Twenty Third* PLATE.

THE CATERPILLAR *a* is Yellow and Black ſo mix'd as in a manner to reſemble *Scotch* Plad; the *Head, Feet and Holders* are Black, with a Spot of the ſame on each *Joint*. They were taken the 20th of *Auguſt* on the *Oak*. I have alſo found them feeding on *Lime Tree*, *Sallow*, *Willow*, and in great Numbers on the *Oſiers* in the *Aits* near *Brentford*, (where I ſhot a young Cuckow, and opening him found his Crop full of them,) ſome of them went into the Ground the 4th of *September*, and chang'd into a *Chryſalis* expreſs'd at *b*. The 30th of *May* following came forth a beautiful *Moth*, the *Upper Wings c*, of a bright Aſh Colour, ſhadow'd and powder'd with light Brown, with double ingrail'd Lines of Red and Black acroſs them, the Back and tip of the *Upper Wings* have a large Spot of Buff on each of them; the under ſide of the *Moth* is of a Pale Buff inclining to White. See *Liſter*'s *Godart n.* 95. *Ray's Hiſt. Inſects p.* 162. *n.* 14.

The CATERPILLAR *e* is of a dark Brown, with ſtripes of Yellow from *Head* to *Tail*, the *Head, Feet* and *Holders* are Brown. They are found on the *Oak*, *Haſel*, and *Lime-Tree* towards the latter end of *May*. One of theſe I fed went into the Ground about the 20th of *June*, and chang'd into a *Chryſalis* as *f* expreſſes, and the 10th of *February* following came forth the *Moth g*, of a Pale rediſh Brown; one of theſe CATERPILLARS being Flyblow'd produc'd an *Ichneumon* at *h*, of a dark red Colour, on the 28th of *April*.

TO THE RIGHT HONORABLE

*Thomas Earl of Strafford*

*this plate is humbly Dedicated by* Eleazar Albin.

*E. Albin del.*

*H. Fenston, Sculp. 1713*

To S^r Tho: Lee of Hartwell in the County of Bucks Bar.
this plate is humbly Dedicated by Eleazar Albin.

E. Albin del.

H. Terrason, Sculp. Londin.

# THE

## DESCRIPTION *of the Twenty Fourth* PLATE.

THE CATERPILLAR *a* is of a Brown Colour on the *Back*, the *Belly* is of Yellowiſh Green, parting from the Brown by an Aſh Colour Streak ſpotted with Yellow, the *Head and Feet* are of a Browniſh Yellow. It was taken the 16th of *July* on the *Jeruſalem Artichoke*, they feed alſo on *Elder*, *Nettles*, *Lettice*, and divers other *Plants*. They Spun up about the middle of *Auguſt*, and changed into a *Chryſalis b*, and the 15th of *May* following came forth the *Moth c*, of a Buff Colour ſpotted with Black; their *Eggs* are of a light Green. They hatch'd the 13th of *June*. The CATERPILLARS, when firſt they came forth of the *Eggs*, were all White and Hairy, ſome of them were *Flyblow'd*, and each produced one *Chryſalis* and *Fly*, repreſented at *e* and *f* in the Plate. Theſe CATERPILLARS are very common and miſchievous in moſt Gardens; but may be eaſily ſhak'd off the *Plants* and kill'd. This is *Godart*'s 93, in Doctor *Liſter*'s Edition.

The CATERPILLAR *g* is of a dark Brown Colour, with a ſtripe of Red down the *Back*, the *Head* and *Feet* Black. It was taken in a *Garden near Hackney* the 14th of *Auguſt*; it fed on *Graſs*, *Chickweed*, *Orach*, *Willow*, and ſeveral other *Plants*. The 2d of *September* it ſpun it ſelf up in the Leaves, and chang'd into a *Chryſalis*; the 14th of *March* following came forth the *Moth*, the *Wings* on both ſides White ſpotted with Black, the upper ſide of the *Tail* Orange Colour ſpotted in like manner. This CATERPILLAR is not very common, (this is *Godart's* 96.) By the Character he gives of the CATERPILLAR it deſerves the Name of the *Diſſembler*. See *Merian Vol.* 1 *Chap.* 46.

THE

## DESCRIPTION *of the Twenty Fifth* PLATE.

THE CATERPILLAR *a* is at the firſt hatching Black and Rough, with Stripes of Orange Colour on his *Sides*, in which ſtate he continues 14 Days, and then caſts his *Skin* and becomes of a Graſs-green Colour with indented Rings of Black ſpotted with Yellow; if you vex him, he will eject a clear Liquor out of his *Sides*, that all his *Hair* will ſtand of a Dew. I am not certain there is any harm in this Liquor, though he ſeems to emit it in his Defence. The 16th of *July* one of them ſpun up himſelf in a tranſparent *Caſe c* with an Entrance much like that of the *Baskets* which *Fiſhermen* lay to catch *Eels*, and changed into a *Chryſalis d*; and on the 18th of *March* came forth a *Moth*, whoſe *upper Side* is repreſented at *e*, and the *under Side* at *f*; this was a *Male*: the Deſcription of the *Female* follows.

The CATERPILLAR *b* is of a more yellowiſh Green, ſpotted with Yellow as the former, with a narrow Ring or Circle round each Spot. This ſpun *Her* ſelf up the 20th of *Auguſt*, and the 5th of *April* it produced a *Female Moth*, much larger than the other; they both have an *Eye* in each *Wing*, and their other Marks are very much alike, tho' they differ in Colour: The *Male* being much darker, and his *under Wings* Orange border'd with Red, and that paler towards the Edge. See *Merian, Vol.* 1 *Chap* 23.

To the Most Noble
*Catherine Dutchess of Buckingham*
*this plate is humbly Dedicated by* Eleazar Albin.

E. Albin del.

H. Terraston, Sculp. London

To the most Noble
*Charles Duke of Grafton*
*this plate is humbly Dedicated by* Eleazar Albin.

*E. Albin del.* *J.L. Terraben, Sculp. London.*

# THE

## DESCRIPTION *of the Twenty Sixth* PLATE.

THE CATERPILLAR *a* in this Table is of a Yellow Colour, ſome of the ſame *Species* are of a light Green, others almoſt Hair Colour, and ſome Reddiſh; they have all a *Tuft of Hair* on each *Joint* of their *Backs*, of their reſpective Colours; the Openings between the *Joints* are of a fine Black like Velvet, and each of them has a more longer and more pointed *Tuft* of Scarlet Hair near the Tail. They were taken at the latter End of *Auguſt* on the *Haſle*, and on the 10th of *September* one of them ſpun up and changed into a hairy brown *Chryſalis b*, with Rings of Yellow; and on the 5th of *February* came forth a white *Moth c d* ſtreaked and motled with Brown. See *Merian*, *Vol* 1. *Chap.* 47.

The CATERPILLAR *e* is black, with white Spots on each *Joint*; on the middle of his *Back* are 5 white Tufts of Hair, the Tops of which are black; It hath a black Tuft on its *Tail*, and 2 on its *Head* repreſenting *Horns*. They were taken the 10th of *May* on the *White Thorn* near *Pecham* and *Eltham* in *Kent*, and by *the* 2 *Waters in Hartfordſhire*; they alſo fed on *Black Thorn* and *Bramble*. Before they ſpun up, which was about the middle of *May*, the Hair of their Sides turn'd Yellow, and the 11th of *June* came the *Moth g* of a light hair Colour, ſtreaked croſs the upper Wings, and ſpotted with Orange and pouder'd with Black. Their Eggs were of a light Grey, incloſed with a brown woolly Subſtance to preſerve them in Winter. This *Chryſalis* is likewiſe Hairy and of a dark brown Colour repreſented at *f*.

THE

## DESCRIPTION *of the Twenty Seventh* PLATE.

THE 2 CATERPILLARS *aa* in this Table are one of them of a yellowiſh Green, with pale yellow Spots, and in each of them a ſmall black Speck, its *Head* of a browniſh Colour; the other is of a light Brown ſpotted as aforeſaid, and has a yellow ſtripe on each Side. They were taken the 16th of *July* on the *Amara Dulcis*, or *woody Night-ſhade*, on which they fed till the 14th of *Auguſt*, and then went into the *Ground*, and changed into a dark red *Chryſalis*; and the 15th of *May* following produced a reddiſh brown *Moth* expreſſed at *c d*. Some of theſe CATERPILLARS had each a large white flat *Maggot* came from them, which made themſelves hard black *Caſes* lined with 4 diſtinct *Membranes* one within another, from which came an *Ichneumon* the 11th of *May*, the *Body* and *Legs* of it were of a dark red Colour; from others came 3 or 4 *Maggots* which changed into ſmall red *Chriſalies* at *e*, each of which produced a *Fly* about the middle of *April* expreſſed at *f*.

The CATERPILLAR *h* was Green ſtriped with White. It was taken in a *Garden* near *Hackney* the 14th of *June* feeding on the *Lark-ſpur*, it went into the *Earth* the 17th of the ſame Month and changed into a *Chryſalis*; and the 23d of *July* came a *Moth* of a dark earthy Colour with 2 black Spots in each *upper Wing*, the *under Wings* of a pale Ruſſet, as was alſo the whole *under Side* of the *Moth*.

To the Right Honorable
*Henry Earl of Thomond*
*this plate is humbly Dedicated by* Eleazar Albin.

E. Albin del.

H. Terasbon. Sculp. London.

To the Right Honorable
*Henrietta Stanley Countess Dow^r. of Anglesea*
*this plate is humbly Dedicated by* Eleazar Albin

*E Albin del.*

*H. Terasson, Sculp. London.*

THE

# DESCRIPTION *of the Twenty Eighth* PLATE.

THE CATERPILLAR *a* in this Table is of an Olive Colour, with a white Spot circled with black, on each *Joint*. It was taken feeding on the *Vine* the 12th of *September*, and the 20th of the ſame *Month* it went into the Ground and changed into a *Chryſalis*; and the 24th of *May* came a dark marbled *Moth*, with 2 Spots of White on the *upper Side* of each *outer Wing*, the *under Wings* and *under Side* of the *Moth* were of a ſhining Hair Colour. One of theſe CATERPILLARS produced an *Ichneumon* of the ſame Kind, expreſt as in Table 27.

The CATERPILLAR *b* is of a dark Colour on the *Back* ſtriped with Black, the *Belly* light Green, parted from the dark Colour by a Streak of White, the *Head* of a deep Yellow. It was taken the 21ſt of *July* feeding on the *Marygold*; they alſo feed on the *Horſe-radiſh*, *Affricans*, and *Cabbage*, of which laſt they make great Deſtruction. They went into the Ground the 9th of *Auguſt*, and the *Moth* came forth in the Beginning of *May*, which was the ſame with the laſt deſcribed, tho' the CATERPILLARS differ in Colour. I am told that by ſprinkling your *Cabbage Plants* with a *Lye* made of *Aſhes* and a Quantity of *Lime*, *Salt* or *Soap-boyler's Lees*, you may deſtroy them and not hurt your *Plants*.

# THE

## DESCRIPTION *of the Twenty Ninth* PLATE.

THE CATERPILLARS *aa* in this Table, that on the *Leaf* is of a dark blueiſh Green, ſtriped on the *Sides* with White and Roſe Colour, and a black Spot on each *Joint*; the other on *Stalk* is of a pale yellow Green, ſpotted on the *Sides* with Roſe Colour and Black; the firſt of them goes into the *Earth*, and changes into a *Chryſalis*. They were taken in the Beginning of *Auguſt* on the *Orrach*; their Change was on the 18th of the ſame Month, and the *Moth* came the 27th of *June* following, being of a light Brown or Ruſſet Colour, as *cd* repreſents in the Table; thoſe that are yellowiſh for the moſt part are diſeaſed, and die without changing into *Chryſalies*.

The CATERPILLAR *e* is of a pale Green, with ſmall black Circles on its *Sides*; its *Head* and *Feet* of a light brown Colour: I had 8 of them, not one of them differing from the other in Spots, Shape or Colour. They were all taken at the ſame time feeding on the *Spear-mint* the 18th of *September*, and on the 27th of the ſame Month they went into the Ground, and changed into *Chryſalies*; and the 23d of *May* came the ſame Kind of *Moth*, as in the Table 28; one of them produced an *Ichneumon* repreſented at *k*, the *Chryſalis* of the *Ichneumon* at *i*. I have alſo found theſe CATERPILLARS very large feeding on the *Knot-graſs* about the 23d of *July*.

To the Right Honorable

*John Lord Ashburnham*

*this plate is humbly Dedicated by* Elcazar Albin.

*E. Albin del.*

*B. Tompson, Sculp. London.*

TO THE RIGHT HONORABLE

*Elizabeth Bruce Countess of Cardigan*

*this plate is humbly Dedicated by* Eleazar Albin.

E. Albin del.

R. Terrasson, Sculp. London

# THE

## DESCRIPTION *of the Thirtieth* PLATE.

THE CATERPILLARS *a a* in this Table, the *uppermoſt* is of a deep Green, its *Head* blueiſh, the *other* of a yellowiſh Green, the *Head* of it lighter coloured, they had both a mark of Black on their *Backs*, on each *Joynt* like *Arrow-heads* pointing towards the tail. They were taken on the *Bramble* the 26th of *June* near *Newington-green*, they went into the *Ground* the 10th of *July* ſpinning the *Earth* about them with their Web, and chang'd into *Chryſalies*; and on the 6th of *Auguſt* came forth a beautiful ſcallop'd winged *Moth* elegantly marked, as is repreſented in the Table. See *Goddart part* 1. *Tab.* 56.

The CATERPILLAR *c* is of a browniſh Olive Colour; with the ſame Marks on his Back as the other. It was taken feeding on *Worm-wood* about the Beginning of *Auguſt*, and changed into a *Chryſalis* on the 5th of the ſame *Month*, and on the 4th of *September* came forth the *Moth d e*. The 3 CATERPILLARS repreſented in this *Table*, though ſo different in Colour, are without doubt of the ſame Species as appears by the *Moths* they produced; I had one of theſe *Moths* which did not come forth till the 26th of *November*. See *Liſter on Goddart*, *page* 54. *N*° 44.

THE

# DESCRIPTION *of the Thirty Firſt* PLATE.

THE CATERPILLAR *a* is of a pale yellowiſh Green, full of ſmall Specks with 2 Spots or Points on his *Tail*. It was found feeding on the *Oak* in *Biſhop's-wood* on the 20th of *September*; and on the 25th of the ſame Month it worked it ſelf up a dark brown *Caſe* on the back-ſide of an *Oak* Leaf, and changed into a *Chryſalis*; and the 30th of *April* came the *Moth*, the *Back* and *upper Wings* of a light Green, ſtriped as it were with Silver, and edged at the Bottom of the *Wings* with Crimſon; the *Body* and *under Wings* whitiſh ſhaded with yellowiſh Green.

The CATERPILLAR *f* is of a light blueiſh Green, ſtriped with White; with ſmall black Spots on the lower *Stripe*, the *Head* Red. It was found the 31ſt of *May* feeding on the *Elm*, it hides it ſelf by drawing the Leaves together with a Web, and feeds commonly in the Night; it went into the *Ground* the 3d of *June*, and changed into a *Chryſalis k*; and the 4th of *July* came the *Moth* of a light brown Colour with darker Shades, the *under Wings* very Dark edged with Yellow, as *h* and *i* repreſents in the *Table*.

*To Kenrick Grantham of Stifford in ye Coun.ty of Essex Esq.r*
*this plate is humbly Dedicated by* Eleazar Albin.

E. Albin del.

H. Terryson, Lith.

To Robert Briston of Mitcheldaver in ye County of Hants Esq.
one of the Clerks Comptroller of his Majestys Green Cloth
this plate is humbly Dedicated by Eleazar Albin.

E. Albin del.

H. Terrason Sculp. Londo.

THE

## DESCRIPTION *of the Thirty Second* PLATE.

THE CATERPILLAR *a* in this Table was of a tranſparent Green, with a Line of White on each Side the *Back*. It was taken on the *Sallow* near *Hampſtead* on the 24th of *June*, on which it fed till the 30th of the ſame *Month*; at which time it ſpun it ſelf up in a *Leaf*, and changed into a *Chryſalis*; from which on the 25th of *July* came a moſt beautiful *Scallop-winged Moth*, *b* and *c* in the Table repreſenting the *upper* and *under Side* of it. See *Liſter* on *Goddart*, *page* 38. *N°* 30.

The CATERPILLAR *d* was of a yellow Colour ſtriped with Black, the *Head* and *Holders* Red. It was found on the *female Fearn*, in a *Wood* by *Charlton* in *Kent* on the 30th of *Auguſt*; for want of *Fearn* I fed it on *Orrach*, and it grew much bigger than the CATERPILLAR in the *Table*, the black Stripe on its *Back* changing to a reddiſh Hair Colour; the 24th of *September* it went into the *Earth*, in order to its Change into a *Chryſalis*, and remained till the *Spring* following, then came forth the *Moth* expreſs'd at *e f*.

THE

# DESCRIPTION *of the Thirty Third* PLATE.

THE CATERPILLAR *a* in this Table was of an Olive Colour on the *Back*, the *Belly* of a pale Fleſh, and the *Head* Red. It was taken on the *Sallow* the 17th of *May*. It fed 'till the 1ſt of *June*, and then went into the Ground, and changed into *Chryſalis b*, and the 12th of *Auguſt* came a *Moth*, the *upper Wings c* of a fine Yellow, clouded and marked with ſeveral indented Lines of a dark Colour; the *under Side* and *under Wings d* of a pale Cream Colour.

The CATERPILLAR *e* was of a dark Straw Colour. It was found on a *great Water-graſs*, in the Marſhes near *Rotherhith* the 10th of *May*; it went into the *Ground* the 12th of the ſame *Month*, and changed into a *Chryſalis* expreſſed at *f*, which produced a *Moth* the 13th of *June* following; it was of the ſame Colour of the CATERPILLAR as at *gh* in the *Table*.

*To George Dashwood of Heningham Hall in yᵉ Counᵗ: of Suffolk Esq.*
*this Plate is humbly Dedicated by* Eleazar Albin

*E. Albin del.*

*H. Terasson Sculp. London*

# To the Lady Jekyl

this plate is humbly Dedicated by Eleazar Albin.

E. Albin del.

H. Terryson, Sculp. London.

# THE

## DESCRIPTION *of the Thirty Fourth* PLATE.

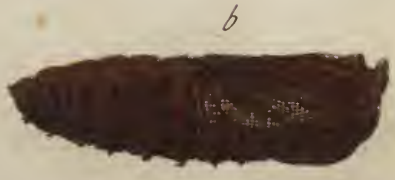
THE CATERPILLAR *a* in this Table was Black intermixed with Spots of Brown divided with Rings of Yellow on the *Back*, the *Belly* was like black Velvet. I found it on the *white-Thorn* about the middle of *May*; it is likewiſe on *black Thorn*, *Haſle* and the *Oak*, on all which they feed very freely: on the 28th of *May* it ſpun up it ſelf on the *Back-Side* of a *Leaf* in a *brown hard Caſe*, and changed into a *Chryſalis*, and the *Moth* came the 20th of *Auguſt*; it was of a light Hair Colour with 3 indented Lines a-croſs the *upper Wings* of a darker Shade; it is expreſs'd at *c d* in the Table.

The CATERPILLAR *e* was of a deep Orange Colour with Rings of Black, it was found on the *Ragwort* about the 20th of *June*, on which I fed it; the 27th of the ſame *Month* it went into the *Earth* in the *Box* and changed into *Chryſalis*, and the 17th of *May* following came a *beautiful black* and *red Moth g h*. Some of theſe CATERPILLARS produced ſmall *Maggots*, which ſpun themſelves up in *Caſes* of *white Silk*, and produced the *Ichneumon* expreſſed at *k*. See *Liſter on Goddart page* 61. *N*º 54.

# THE

## DESCRIPTION *of the Thirty Fifth* PLATE.

THE CATERPILLAR in this Table was of a reddiſh brown Colour on the *Back*; the *Belly* of a Fleſh Colour, his *Feet* and *Nippers* black and very hard and ſharp, by which he penetrates into the very Heart of the *Willow*; I found him in *November*. Theſe CATERPILLARS are ſometimes found in the *Poplar*, *Aſh* or *Elm*; and Dr. *Liſter* ſays *he found it in the Oak*. It has been obſerved by ſome of the Curious, that this miſchievous *Inſect* is 3 Years in its Progreſs from the *Egg* to the *Moth*. I was obliged to keep it in a tin Box with ſome of the *Willow wood*, for he eat his way through a Box of Wood I had put him in before; he changed into a *Chryſalis* about the Beginning of *May*, and about the middle of *June* came the *Moth c d*, of a dark Hair Colour, ſtreaked with White; the *Moth* is to be found on the Bodies of the aforeſaid Trees, toward the latter end of *June*. Theſe CATERPILLARS uſually lay themſelves up in the Holes which they make in Trees, in pretty thick *Webs*; when the *Moth* is ready to come forth, the *Chryſalis* forces its fore part about half an Inch out of the Tree, otherwiſe the *Wings* would be lamed, by bruſhing off that Humidity that is provided for their Growth; to prevent this Inconvenience, Nature has in an extraordinary Manner provided this *Chryſalis* with ſtrong *Spinulæ* round each *Joint*, pointing towards the *Tail*, by which it is enabled to force its fore-part through the *Web*. See *Liſter on Goddart*, *page* 49. *N*º 39.



TO THE RIGHT HONORABLE

*George Earl of Cardigan*

*this Plate is humbly Dedicated by* Eleazar Albin.

E. Albin del.

H. Fourdrinier, Sculp. Londini

To the Right Honorable
*Worsley Lady Cartenet Baroness*
*this plate is humbly Dedicated by* Eleazar Albin.

*E. Albin del.*

*H. Terrafson, Sculp. London.*

# THE

# DESCRIPTION *of the Thirty Sixth* PLATE.

THE CATERPILLAR *a* was of a yellowiſh Green, with a red *Head.* It was taken folded up in the *Leaves* of the *Nut Tree* on the 2d of *September* in a Wood near *Woolwich* in *Kent*, it ſpun it ſelf up the 8th of the ſame Month, and the 8th of *January* following came the *Moth* of a ſtraw Colour mottled with Brown; all the *Females* of this Kind that I have kept had their *Wings* contracted or ſhrivell'd up, as is expreſſed in the Table. I believe it is natural for them to have their *Wings* after that manner for in ſome Kinds, as particularly in Table 89, 90, the *Females* have only the Appearance of *Wings*, and never go from the Place where they lay in *Chryſalies*, but lay their *Eggs* on their very *Web.*

The CATERPILLAR *f* was of a full green Colour, the *Head* dark Red, it was taken roll'd up in the Leaves of the *Plumb Tree* on the 24th of *May*, and on the 30th of the ſame Month it ſpun it ſelf up and changed into *Chryſalis g*; the *Moth* came the 21ſt of *June* following, the *Wings* of a reddiſh Brown, the *Male kl* ſomewhat darker than the *Female hi*, as is expreſs'd in the Table. Theſe CATERPILLARS are very nimble in their Motion both forwards and backwards, as I have obſerved moſt of them are that fold themſelves up in the *Leaves*; if you force them out of their *Leaf* they let themſelves fall by a Thread to the next *Leaf* or *Branch*, by which, when all is quiet, they climb up to their former Habitation.

THE

## DESCRIPTION *of the Thirty Seventh* PLATE.

THE CATERPILLAR *a* in this Table was of a pale Green. It was taken in the *Leaves* of the *Elder*, which it had rolled up like a *Wafer* to ſecure its ſelf from Danger, wherein it lies moſt part of the *Day*, feeding commonly in the *Night*: It ſpun it ſelf up the 7th of *Auguſt* in a *Web* to the Side of the *Box* in which I fed it, and remain'd in its CATERPILLAR-*ſtate 'till the Beginning of April*, and then changed into a *Chryſalis b*, and the 15th of *June* came the *Moth cd* of a pale Brown Colour. I had ſome of theſe CATERPILLARS which were *fly-blow'd* by *Ichneumons* and others by a ſmall Sort of the *common Flys*. The *Maggots* of each, ſoon after they came out of the CATERPILLARS, changed into *Chryſalies* at *eg*, in which *State* they lay till the Spring following, and then produced the *Flys fh*. See *Liſter on Goddart*, *page* 62. *N*º 55.

The CATERPILLAR *i* is of a pale yellow Green; it was found wrapped up in the *Leaves* of the *Nettle* at the latter end of *May*, after the ſame manner as the *Elder* CATERPILLAR above-mentioned; it changed the 2d of *June* into a *black Chryſalis*, and in 14 Days came a *Moth* at *lm*, White neatly ſpotted with Black; which we commonly call the *Magpie*. See *Liſter on Goddart*, *page* 66. *N*º 61.

*To the Reverend D.r Bisse Chancellour of y.e Church of Hereford this plate is humbly Dedicated by* Eleazar Albin.

E. Albin del.

To the Honorable
*Elizabeth Stanwell now Mrs. Bromley*
*this plate is humbly Dedicated by* Eleazar Albin

W. Foster Sculp. London.

THE

## DESCRIPTION *of the Thirty Eighth* PLATE.

THE CATERPILLAR *a* in this *Table* was of a light Green Colour, with ſmall Specks of Black. Mr. *Dandridge* found it feeding on the *Flowers* of *Cow-Parſnep* the 30th of *June*, and fed it on the ſame in a *Box*, in which it ſpun it ſelf up and changed into *Chryſalis b* the 16th of *July*. He went ſome time after to look for more of theſe CATERPILLARS, but could not find any tho' he examin'd ſeveral of the Plants to the very Roots: upon obſerving Holes in ſome of the *Stalks* he cut them, and found many of the *Chryſalies* ſpun up in the hollow part of the *Stalks* pretty near one another, as is expreſs'd at the Letter *b* in the Table. The *Moth c d* came the 12th of *Auguſt*, the *upper Wings* of a dark Olive, the *under Wings* and *under Side* of the *Moth* of a light Hair Colour.

THE

# DESCRIPTION *of the Thirty Ninth* PLATE.

THE CATERPILLARS *aa* in this Table were differing in Colour, the one Yellow with Stripes of a deeper Shade and Spots of Red on each *Joint*, the other dark Red, ſpotted on the *middle Joints* with Yellow, their *Heads* Red with a *Ring* of Yellow round their *Necks*: I took them at the *Beginning of June* on the *Heart-cherry Tree*: they were very numerous on the *Pear*, *Apple*, *Plumb*, and *Lime Trees*, eating ſeveral of them bare; they went into the *Ground* about the *middle of the ſame Month* ſpinning themſelves a *Web*, and changed into a *Chryſalis b*, and the Beginning of *April* came the *Moth c d*, of a dusky Yellow ſtriped and motled with Black. The *Moth* lays her *Eggs* in the Cracks and hollow Places of the *Trees*. Theſe CATERPILLARS are call'd *Loopers*, becauſe in their walking they draw their *Bodies* into the Form of a Loop by bringing their Ends together; theſe and moſt others of this *Kind* have a *Web* coming from their *Mouths* to the *Branch*, by which they convey themſelves from one *Bough* to another at their Pleaſure. The way of deſtroying theſe is by killing the *Moths* when firſt hatched, which are to be found on the *Bodies* of the aforeſaid *Trees*. See *Merian*, *Vol.* 1. *page* 75. *Chap.* 37.

The CATERPILLAR *e* was of the ſame Colour with the *Older Branches* of the Tree ſo as ſcarcely to be diſcerned from the *Wood*. It was found the 12th of *May* on the *Black-thorn*: I fed it 'till the 24th of the ſame *Month*, at which time it went into the *Ground* and changed into *Chryſalis f*, and the 11th of *Auguſt* following came the *Moth g h*, of a pale Buff, having a broad Cloud of a darker Colour a-croſs the *middle* of the *upper Wings*, and Spots of the ſame round the *Edges* both of the *upper* and *under Wings*.

# To the Right Honorable
## Mary Bentinck Countess Dow.r of Essex
This plate is humbly Dedicated by Eleazar Albin.

E. Albin del.

H. Fenton, sculp. Londo.

To the Right Honorable

*Elizabeth Butler Countess Dow.r of Derby*

*this plate is humbly Dedicated by* Eleazar Albin,

*E. Albin del.*

*H. Terrebron, Sculp. London.*

# THE

## DESCRIPTION *of the Fortieth* PLATE.

THE CATERPILLAR *a* in this Table was of an Olive Green Colour with red and yellow Spots on each *Joynt*, the *Head* pale red, it had four *Riſings* or *Bunches* tipt with Yellow on the *Back* near the *Hinder-part*. It was found feeding on the *Elm* in the Beginning of *September*. I fed it till the 26th of the ſame Month; it then went into the *Earth* in the Box and changed into a *Chryſalis b*, of a dark Red Colour, and the 27th of *May* following came forth the *Moth* expreſs'd at *c d*, being White motled with Black.

The CATERPILLAR *e* was finely marked with divers Colours, having *Riſings* or *Bunches* on the *middle* of its *Back*. It was found on the *White-thorn* in *September*, and the 17th of the ſame *Month* it ſpun it ſelf up in the *Leaves* and changed into a *Chryſalis*, and remained in that *State* till the Beginning of *April*, at which time came forth a yellow *Moth* marked as at *g h* in the *Table*.

# THE

## DESCRIPTION *of the Forty Firſt* PLATE.

THE CATERPILLAR, *a*, in this Table was found on the *Oak* on the 19th of *June* near *Highgate*, it was about the bigneſs of the ſmaller Figure in the Table, and of a brown Colour; after ſome time it changed its *Skin*, and grew to the Bigneſs of the largeſt expreſs'd at *a*, it was of a pale browniſh Aſh Colour, with four *Riſings* or *Bunches* on the *Back*, the hindmoſt of which was tipt with Red, as were alſo the *Holders* next the *Tail*; it went into the *Earth* the 10th of *July*, and changed into a *Chryſalis* of a dark red Colour; where it remain'd till the latter end of *May*, at which time came a *Moth* very like that in the foregoing Table. *Q.* Whether they may not be *Male* and *Female*.

The CATERPILLAR, *e*, in this Table was of a pale Olive Colour, it was taken on the *Black-thorn*, at the Beginning of *May*, and the 16th of the ſame Month it went into the *Earth*, and with the ſame work'd it ſelf a *Caſe*, and changed into a *Chryſalis*, and on the 22d of *June* following came a *Moth* of a pale Buff Colour, having a broad Cloud of a darker Colour croſs the middle of the *upper Wings*, and Spots of the ſame round the *Edges* of the *upper* and *under Wings*.

To the Right Honorable
*The Lady Arthur Somerset*
*this plate is humbly Dedicated by* Eleazar Albin

E. Albin del.

H. Fourdrinier, Sculpsit

TO THE HONORABLE
*Edward Southwell Esqȝ.*
*this plate is humbly Dedicated by* Eleazar Albin.

*E. Albin del.*

*W. Tempest from Smith, London.*

THE

## DESCRIPTION *of the Forty Second* PLATE.

THE CATERPILLAR, *a*, in this Table was of a pale Cream Colour, ſhadowed on its *Back* with Brown and ſpotted with Red. It was found on the *Wild-Roſe* between *Iſlington* and *Highgate*; the *Head* was much ſmaller than uſual; it ſpun it ſelf up between a *Leaf* and the *Side* of the *Box* on the 22d of *June*, and changed into a *Chryſalis*, *b*; and the 10th of *July* came a *Moth* at *c*, *d*, of a fleſh Colour ſtreaked with Brown.

The CATERPILLAR, *e*, was of a muddy Green Colour, motled with darker Colours like the *Bark* of a *Tree*; the *hindermoſt Feet* of this CATERPILLAR are remarkably longer than in moſt others that I have obſerved, which it draws in or thruſts out as it has occaſion. It was found on the *White-thorn* the 10th of *September*, and on the 24th of the ſame *Month* it ſpun it ſelf up in the *Leaves*, and changed into *Chryſalis*, *f*; and the 15th of *May* came a Beautiful clouded *ſcallop-winged Moth* at *g*, *h*, in the *Table*.

THE

## DESCRIPTION *of the Forty Third* PLATE.

THE CATERPILLAR, *a*, in this Table was Brown, with five large light-coloured Spots on its *Sides*, the *Head* Red, and near its *Tail* it had two *Riſings* ending in Points of the ſame Colour. It was taken on the *White-thorn* the 8th of *May* near *Lewſham* in *Kent*. I fed it 'till the 23d of the ſame *Month*; it then went into the *Earth* in the *Box*, and changed into *Chryſalis*, and the 26th of *September* came a *Moth*, *b*, *c*, of a pale red and yellow Colour.

The CATERPILLAR, *d*, in this *Table* was of a pale Cream Colour ſpotted with Black and Red. It is commonly found on the *Gooſe-berry* and *Currant Trees* at the Beginning of *May*, and the 22d of the ſame *Month* it ſpun up its ſelf, and changed into a red *Chryſalis* with *Rings* of Yellow; and the 12th of *June* came forth *a black and white Moth intermixt with Yellow*; the *Eggs* of this *Moth*, ſoon after they are laid, hatch, and the *young* CATERPILLARS live all *Winter* in Places of Shelter, and in the Spring begin to feed as ſoon as the *Buds open*; the way to preſerve the *Trees* from thoſe CATERPILLARS is by cleanſing and ſhaking them when the *Snow* is upon the *Ground*. See *Liſter on Goddart*, *page* 13. *Nº* 9. *Merian Vol.* 1. *Chap.* 29.

To Mrs Bovey of Flaxley
this plate is humbly Dedicated by Elcazar Albin.

E. Albin del.
H. Fourdrinier Sculp. London.

To the Right Noble

*The Marquess of Tullibardine*

*this plate is humbly Dedicated by* Eleazar Albin.

*E Albin del.* *H. Toreckson Sculp. London*

THE

# DESCRIPTION *of the Forty Fourth* PLATE.

THE CATERPILLAR, *a*, in this Table was of a dark Colour ſpotted with White, with a red *Head*, (I had ſome of this Sort almoſt all White, others light Aſh Colour, others almoſt Black.) It was taken on the *White-thorn* the 24th of *May* near *Hornſey-wood*. I fed it till the 12th of *June*, at which time it went into the *Ground*, and changed into a *Chryſalis*, *b*, and at the *Beginning of April* came the *Moth*, *c*, *d*, of a pale yellowiſh Colour, ſhadowed and ſpotted with deeper Shades of the ſame.

The CATERPILLAR, *e*, was Fleſh Colour, the *Head* dark Brown, with ſeveral Streaks and Spots of the ſame on the *Back* and *Sides*. It was taken on the *Sallow* the 15th of *May*. I fed it till the 13th of *June* it then went into the *Ground*, and changed into a *Chryſalis* at *f*; the *Moth*, *g*, *h*, came the 9th of *July* the *upper Wings* of a dark Yellow, the *under Wings* and *under Side* of a light Hair Colour.

THE

# DESCRIPTION *of the Forty Fifth* PLATE.

THE CATERPILLAR, *a*, in this Table, was of a Sea-green. It was taken on the *White-thorn* the 12th of *May* near *Peckham*, and the 14th of the ſame *Month* it went into the *Ground*, and changed into a *Chryſalis*; and the *Moth* came forth the 25th of *September*, the *upper Wings*, *b*, were of a light Brown, with dark Stripes a-croſs them, the *under Wings c* of a pale Yellow.

The CATERPILLAR, *d*, was of a yellowiſh Green. It was found feeding on the *White-thorn* near *Eltham* in *Kent* on the 30th of *May*, and the 10th of *June* it ſpun up between the *Leaves*, and changed into a *Chryſalis*, and the *Moth*, *f*, *g*, came forth the 26th of the ſame Month.

To M^rs Mary Goupy
this plate is humbly Dedicated by Elea zar Albin.

E Albin del.

To M.rs Howland

this plate is humbly Dedicated by Eleazar Albin

Albin del.

THE

# DESCRIPTION *of the Forty Sixth* PLATE.

THE CATERPILLAR, *a*, in this *Table* was of a dark Green Colour, having a *Bunch* or *Riſing* on the *middle* of its *Back*, and three ſmall *Bunches* on each *Side* near the *firſt Holders*. It was taken feeding on the *Maple* near *Highgate*; about the middle of *September*, and the 24th of the ſame Month it ſpun it ſelf up to the Side of the *Box*, and changed into a *Chryſalis*, remaining in that State 'till the 12th of *February*, at which time came forth a Beautiful yellow *Moth*, *b*, *c*.

The CATERPILLAR, *b*, was almoſt of the ſame Colour with the Twigs of the *Black-thorn*, on which it was taken the 21ſt of *May*, and on the 28th of the ſame *Month* it ſpun it ſelf up in a *white Web* in the *Leaves*, and changed into a *Chryſalis*, *c*; the 21ſt of *June* it produced the ſame *Moth* as above.

# THE

## DESCRIPTION *of the Forty Seventh* PLATE.

THE CATERPILLARS, *a a*, in this Table were of different Colours, ſome Green and Yellow, others Purple and Yellow. They were found on the *Currant Trees* at the Beginning of *April*, I fed them till the 22d Day of *May*; at which time they went into the *Ground* and changed into *Chryſalies*, and on the 17th of *June* came forth a *Moth* of a Ruſſet Colour ſtreaked and ſpotted with Black in the *upper Wings*; one of the CATERPILLARS produced the *Ichneumon*, *e*; theſe CATERPILLARS are hatched at the latter end of the Year and live all Winter. See *Liſter on Goddart page* 19. *N*º 12. *Merian*, *Vol.* 1. *Chap.* 25.

The CATERPILLAR, *f*, was very elegantly marked with divers Colours. It is often found on the Garden and Wild *Orach* at the latter end of *Auguſt*. I fed it till the 16th Day of *September*, at which time it went into the *Earth* in the *Box*, and changed into a *Chryſalis*, and on the 11th of *July* following came the *Moth* of the Colour of a wither'd *Leaf*.

TO THE RIGHT HONORABLE

*Elizabeth Seymour Countess of Thomond*

*this plate is hmbly Dedicated by* Eleazar Albin.

E. Albin del.

H. Fenton, Sculp. London.

*To M.rs Elizabeth Herbert*
*this plate is humbly Dedicated by* Eleazar Albin

E. Albin del.

H. Fenwick, Sculp. London.

# THE

## DESCRIPTION *of the Forty Eighth* PLATE.

THE CATERPILLAR, *a*, in this Table was of a yellow Green Colour, the *Head* Red with Spots of the ſame on the *Back*. It was taken on the *Haſle* about the middle of *Auguſt*, on which it fed till the 2d of *September*, and then ſpun it ſelf up and changed into a *Chryſalis*, in which it remained till the 20th of *February*, then came forth a ſmall Green *Moth*, *b*, *c*.

The CATERPILLAR, *d*, was Greeniſh with dark Clouds. It was found feeding on the *White-thorn*, about the latter end of *April*, near *Hornſey-wood*; on the 10th of *May* it ſpun it ſelf up by gathering or drawing the *Leaves* together with a *thin Web* in which it changed into a *Chryſalis*, *e*; the *Moth* *g*, *f*, came the 1ſt of *June* following, being of a blueiſh Green Colour with two Streaks of whitiſh Green a-croſs the *upper Side* of the *Wings*.

THE

## DESCRIPTION *of the Forty Ninth* PLATE.

THE CATERPILLARS, *a*, *a*, in this Table are of divers Colours, ſome pale Brown, ſome Fleſh Colour, others Green. They were taken on the *Oak* on the 23d of *Auguſt* near *Muzzle-hill*, and on the 28th of the ſame *Month* they tied themſelves up after the Manner of the *white Butterfly*, *Table 1ſt*, to the Sides of the Box with their *Heads* upward, and changed into *Chryſalies*, *b*, of a deep Green, with a red Spot at the End of the *Tails*; the *Moth*, *c*, *d*, came the 29th of *September*, it was of a Fleſh Colour.

The CATERPILLARS, *e*, were differing in Colour, ſome Brown, others Green, all of them having Red *Heads*. They were found on the *wild Roſe* on the 29th of *May* near *Hornſey*; and the 14th of *June* they went into the *Earth* in the *Box*, and changed into *Chryſalies*, and the 21ſt of *February* came the *Moth* of a dark Brown Colour.

To the Right Honorable
*The Lord Arthur Somersett*
*this plate is humbly Dedicated by* Eleazar Albin

*E. Albin del. & sculp. 1723.*

TO THE HONORABLE

*Mrs Ann Somersett*

*this plate is humbly Dedicated by* Eleazar Albin.

*E. albin del.*

*K. Jefferson, Scrib. & Sculp.*

THE

# DESCRIPTION *of the Fiftieth* PLATE.

THE CATERPILLAR, *a*, in this Table, was of a Sea-green, the *Head* and *Tail* Red. It was taken the 28th of *June* feeding on the *Oak*, and the 3d of *July* it tyed it *Self* up after the manner of the *white Butterfly*, *Table* the 1ſt, and changed into a *Chryſalis*, the *Head* of which ſeemed as if cut off, as is expreſſed at *b*; in the *Table*, the 21ſt of *July* came forth a *Moth* of a pale Fleſh Colour, with ſmall Spots and Circles in the *Wings*.

The CATERPILLAR, *e*, was of a yelloviſh Green, the *Head* of a deep Green, with Spots of Red on each *Joint* near the *Back*, and *two Points* of the ſame Colour ſtanding upright near the *Tail*. It was taken the 14th of *July* on the *Bramble* or *Blackberry-buſh* near *Chiſſelhurſt* in *Kent*, and the 28th of the ſame *Month* it made it *ſelf* a *Houſe* by *drawing* or *ſpinning* the *Leaves* together with a *thin Web*, in which it changed into a *Chryſalis*, *f*, and the 29th of *Auguſt* came a *Moth*, *g*, *h*, the *upper Wings* Green, the *under Wings* and *under Side* of a Hair Colour.

# *The* DESCRIPTION *of the Fifty First* PLATE.

THE CATERPILLAR, *a*, in this *Table* was Green. It was found feeding on the *Radiſh* about the middle of *June*, they alſo feed on *Cabbage*, *Horſe-radiſh*, *Creſſes*, and *Scurvy-graſs*; at the latter end of the ſame *Month* it tied it ſelf up by the *Tail*, and croſs the *Middle*, and the 13th of *July* came the *Butterfly*. The *Male*, *c*, *d*, and *Female*, *e*, *f*, are very like the *Butterflies* in the firſt *Plate* in Marks and Colour, but conſiderably leſs. There is alſo another *white Butterfly* frequent in *Woods*, a great deal leſs than this; the CATERPILLAR which it produces, I cou'd never yet find. See *Liſter on Godart, page* 12. N° 8.

*To William Byrd of Westover in Virginia Esqr.*
*this Plate is humbly Dedicated by Eleazr. Albin.*

*To John Cook Esq.r*
*This Plate is humbly dedicated by Eleaz.r Albin*

# *The* DESCRIPTION *of the Fifty Second* PLATE.

THE ſtrange-ſhaped CATERPILLAR, *a*, in this *Table*, was Yellow. It was found on the *Oak* in *Cain Wood* near *Highgate*, the 11th of *June*; and changed into a *Chryſalis* the 17th of the ſame *Month*. On the 14th of *July* came the *Butterfly*, the *upper Side*, *b*, of a dark brown and blueiſh Purple, the *under Side* *c*, of a light Hair Colour, it is commonly called the Purple Hair-ſtreak.

The CATERPILLAR *d*, was Green with a Stripe of Yellow on each *Side*. It was found on the *Cabbage* about the latter End of *June*, and the Beginning of *July* it tied it ſelf up and changed into *Chryſalis*, *e*, the 20th of the ſame Month came forth the Green vein'd *Butterfly* *e*, *f*. See *Merian*, *Vol.* 2. *Chap.* 39.

# *The* DESCRIPTION *of the Fifty Third* PLATE.

THE CATERPILLAR, *a*, in this *Table*, was Green, and covered all over with ſhort *Hair*. It was found feeding on *Graſs* the 8th of *May*, and the 24th of the ſame *Month* it faſtned it ſelf up by the Tail, and changed into a ſhort thick green *Chryſalis* ſtreaked with Black, and the 11th of *June* came the Meadow Brown *Butterfly*: *b*, *c*, the *Male*; and *d*, *e*, the *Female*; having each an *Eye* in their *upper Wing*.

*To S.r Hans Sloane Bar.t M.D. & F.R.S.*

*this Plate is humbly Dedicated by* Eleazar Albin.

H. Fogarson Sculp. 1[illegible]

TO THE Rt HONORABLE

Thomas Lord Foley

This Plate is humbly dedicated by Eleazr Albin.

# *The* DESCRIPTION *of the Fifty Fourth* PLATE.

THE *Belly* and half the *Back* of the CATERPILLAR, *a*, in this *Table* were Brown ſpotted with Red, the other part White, with Briſtles of the reſpective Colours on each. It was found feeding on *Hops* the 26th of *July*; the 7th of *Auguſt* it changed into *Chryſalis*, *b*, and the 23d of the ſame *Month* came a *Scallopt-winged Butterfly*, *d*, *e*, of a Brown Orange Colour, having in the *Middle* of the *under Side* of each *under Wing* a white mark like a *Comma*, from which it is uſually ſo call'd. See *Merian Vol.* 1. *Chap.* 14.

# *The* DESCRIPTION *of the Fifty Fifth* PLATE.

THE CATERPILLAR, *a*, in this *Table* was blueiſh ſpotted and *briſtled* with Yellow, the *Head* and *Feet* Black. It was taken on the *Elm* the 10th of *June*. The CATERPILLARS when *young* keep together, and when *full fed* they ordinarily *tie themſelves* up by the *Tail* under the *Coppings of Walls*, or ſome ſuch ſhelter, and change into *Chryſalis*, *b*, which is about the middle of *June*; and in the beginning of *July* produce a *Butterfly* *c*, *d*, commonly called the *great Tortoiſe-ſhell*. From ſeveral of theſe *Chryſalies* came Broods of ſmall *Ichneumon Flies* expreſſed near the *Chryſalies*. See *Liſter on Godart page* 3. *N.°* 3. See *Merian, Vol.* 2. *Tab.* 2.

*To John Philip Brayne of Dantzick M.D. & F.R.S.*

*This Plate is humbly dedicated by Eleazr Albin.*

To Mr. Thomas Robe, Merch.t
This Plate is humbly dedicated by Eleaz.r Albin.

## *The* DESCRIPTION *of the Fifty Sixth* PLATE.

THE CATERPILLAR, *a*, of this *Table* is moſt commonly Black, and ſometimes Yellow, much like the CATERPILLARS of the third *Table*, and is not eaſily diſtinguiſhed from them; this ſeem'd to me ſomewhat ſlender. It was found ſpun up in the *Leaves* of the large *Nettle*, the 22d of *June*; at the latter end of the ſame *Month*, it changed into *Chryſalis*, and the 15th of *July* came a moſt Beautiful *Butterfly*, *c*, *d*, called the *Painted Lady*. See *Liſter on Godart*, *page* 7. *N°* 5.

# *The* DESCRIPTION *of the Fifty Seventh* PLATE.

THE CATERPILLAR in this *Table* was Green, and ſtriped with White, the laſt of which went up into the Horn on his *Tail.* It was taken feeding on the *Poplar* at the Beginning of *September*, and at the latter End of the ſame *Month* it went into the Ground and changed into a *Chryſalis*, and remained in that State till the Beginning of *May*, at which time came forth the *Moth*, *c*, *d*, the CATERPILLARS with *Tails* produce *Moths* that are very ſwift of Flight, for which Reaſon they have the Name of *Hawk Moths*. this being commonly called the *Poplar Hawk Moth*;

# To the Right Honorable

*The Countess of Schaumbourg Lippe and Buckenbourg*

*this Plate is humbly Dedicated by* Eleazar Albin.

H. Terasson, Sculp. Londini.

To the Hon.ble Collonel George Churchill
this plate is humbly Dedicated by Eleazar Albin.

H. Terasbon Sculpsit

## *The* DESCRIPTION *of the Fifty Eighth* PLATE.

THIS CATERPILLAR was taken on the *Haſle* in *Norwood* near *Dulwitch* the 9th of *Auguſt*, it was of a browniſh Orange Colour: I have drawn it both in its moving and ſtanding Poſture, the better to expreſs its odd *Shape* and Manner from its *Look* which has ſome Reſemblance of a *Cruſtaceous Fiſh*, for which Reaſon I have given it the name of the *Lobſter* CATERPILLAR. It was kept in a *Box* with ſome of the Branches of the *Haſle* ſet in *Bottles* with *Earth* under them to facilitate its Change; but I did not perceive it to eat. It ſpun it ſelf up the 13th of the ſame Month between the *Bottles* in a tranſparent *Caſe*, and dyed without changing.

# *The* DESCRIPTION *of the Fifty Ninth* PLATE.

THE CATERPILLAR, *a*, *a*, in this *Table* was Yellow, with a Shade of Green on its *Sides*, a blueiſh Stripe on its *Back* edged with ſmall *Lines* of Black, and over all its *Body* ſmall white Specks, it had two black Spots repreſenting *Eyes* in the upper Part of its *Head*. It had three *Feet* and eight *Holders* on each *Side*, which I have obſerved in moſt of the CATERPILLARS of the *Ichneumon* Kind. Their manner in Standing is different from other CATERPILLARS, for they generally curl their *Tails*. This was found on the *Dutch Willow* the 2d of *July*, and the 10th they ſpun a *Cylindrical ſhining Caſe*, *b*, and the 25th of *May* came the *Fly*, *c*.

The two CATERPILLARS on the upper Part of the *Branch*, *d*, *g*, were taken at the Beginning of *July*; the 8th of the ſame *Month* they went into the *Earth*, and made a *Caſe*, *e*, like the former; about the middle of *Auguſt* the CATERPILLAR, *d*, produced the *Fly*, *f*, and the CATERPILLAR, *g*, that at *h*.

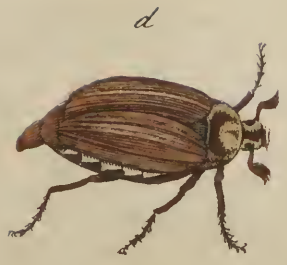
TO THE R^T HONOURABLE

The Lord Ilay

This Plate is Humbly Dedicated by Elcaz.r Albin.

Albin del.

Hulett — Sculpsit



To Richard Lyddill Esq.

This Plate is humbly dedicated by Cleaz.r Albin.

# *The* DESCRIPTION *of the Sixtieth* PLATE.

THE *Grub* or *Worm* in this *Table*, at *a*, is commonly found in *Graſs-fields* which are new ploughed. I found many of them by following the *Plough*. I obſerved that the *Crows* and *Rooks* were very diligent in picking them up. I put ſeveral of them into a *Box*, in which they killed one another with their *Nippers*; thoſe which remained I kept in a *Pot* of *Earth* with ſome of the Roots of *Graſs* and other *Plants*. They changed into *Chryſalis*, *b*, about the Beginning of *September*, and in the middle of *May* came forth a brown *Beetle* called the *Chafer*, *Oak Web*, or *May Beetle*, the *Male* at *d*, and the *Female* at *c*,

# *The* DESCRIPTION *of the Sixty First* PLATE.

THE *Grub* on the *green Leaf*, at *a*, was purple and Yellow. It was found on the *Orach* the 25th of *June* feeding on *ſmall Inſects*, which were very numerous on that *Plant*. With theſe I fed them till they compoſed themſelves for Change, which they did the 27th of *June*, by faſtning their *Tails* to the *Leaves* of the *Plant*, and chaned into *Chryſalis*, *b*; from theſe came the red *Beetle* ſpotted with Black, called the *Cow-lady*, *c c*, the uppermoſt of which hath its *Wings* expanded, See *Liſter on Goddart page* 108. *Nº* 112.

The dark colour'd *Grub* under the *Graſs* at *d*, was found in the *Earth* the 25th of *April*. I fed it on the Roots of *Graſs* in a *Pot* till the 20th of *Auguſt*. It then changed into a *Chryſalis*, *e*. I had two one of them was kept moiſt, and produced a *Fly* called the *Harry long Legs* or *Taylor Fly*, this prov'd a *Female*, *g*, and laid four hundred *Eggs* in a *Box* I kept her in; the other was kept dry, and it ſhrunk up and died. I have often obſerved that keeping *Chryſalies* too dry is a great Hindrance of their perfecting the *Fly*. The *Male* is expreſſed at *f*. See *Liſter on Goddart*, *page* 131. *No* 139.

To John Acton of Basingstoke in Hantshire Esq
This Plate is Humbly Dedicated by Eleaz.r Albin

E. Albin del.

Hulett Sculp.t

To S.r David Hamilton Physician to y.e Princess, & F.R.S.
This Plate is humbly dedicated by Eleaz.r Albin

# *The* DESCRIPTION *of the Sixty Second* PLATE.

THE CATERPILLAR, *a*, in this *Table*, was of a muddy Green ſpotted with White. It was found feeding on an *Oak* in *Cain Wood* the 27th of *May*; it ſpun up on the 30th of the ſame *Month*, and changed into a *Chryſalis*, *b*, and the 22d of *June* came the *Moth* of an Olive Colour ſpotted with Brown, *c*, *d*.

Theſe black CATERPILLARS of the *Ichneumon* Kind, *e*, were found feeding on the *Turnip Leaves* in the Beginning of *September* 1719, they being ſo numerous at that time about *London*, that they deſtroyed whole Fields of them: about the latter end of *September* they went into the *Earth* and ſpun themſelves up in a tranſparent *Caſe*, and changed into a *Chryſalis*; and in *May* following came forth a ſmall *Ichneumon Fly*, figured in the *Table* at *g*.

# *The* DESCRIPTION *of the Sixty Third* PLATE.

THE yellowiſh *Grub*, *a*, on the *Leaf* was ſpotted with Black. It was found on the *Dutch Willow* about the 20th of *June*, and changed into *Chryſalis*, *b*, the next Day; and the 5th of *July* came a large red *Beetle*, *c*, which lays *Eggs* of a Cream Colour longiſh and ſtanding upright on the *Leaf*, *d*.

The *Maggot*, *e*, is commonly found in *Privies* and corrupt Water of *Sinks*. I obſerv'd it to have fourteen ſmall Protuberances on the *Belly* like *Feet*, by which it climbs up into a Reſting-place when fit for Change; I believe it makes uſe of its long *Tail* in guiding it ſelf in the Water. It changed into *Chryſalis*, *f*, about the latter End of *Auguſt*, and remained juſt fifteen Days in that State, before the *Fly*, *g*, came forth, which repreſents one of the *Bee* Kind.

*To the Honourable M.rs Thynne*

*This Plate is humbly dedicated by Eleaz.r Albin*

*To Vice Chamberlain Cook*

*This Plate is humbly dedicated by Eleaz. Albin*

# *The* DESCRIPTION *of the Sixty Fourth* PLATE.

THE *Hexapode Worm* on the *Leaf*, at *a*, was browniſh. It was found on the *Lime-Trees* at the latter End of *July*, and fed on ſmall *Flies* in the ſame Manner of the *Worm*, *a*, of the ſixty firſt *Table*; on the ſecond of *Auguſt* it ſpun it ſelf up in a white *Silken Caſe* like that of a *Spider*'s Egg, and the 16th of *May* following came the *Green-Golden-ey'd Fly*; it having the moſt beautiful *Eye* of any *Inſect* that I have yet ſeen. His *Wings* are very remarkable for their Tranſparency and bright Colouring in them like that of a *Rainbow*, and when viewed with the *Microſcope*, the Edges and every Diviſion of the *Wings* are beſet with long *Hairs*. I have obſerved in the Woods two Kinds more of them, the one of a dark Purple, and the other of a blueiſh Green. See *Liſter on Godart page* 93. *N°* 104.

# *The* DESCRIPTION *of the Sixty Fifth* PLATE.

THE CATERPILLAR, *a*, was Fleſh coloured, having a large *Gibboſity* on its *Back*. It was found near *Hornſey* Wood on the *wild Roſe*, and another of the ſame kind on the *Oak*. They ſpun themſelves up in the *Leaves* folded together with a *white Web*, and changed into *Chryſalis*, *b*, and about the middle of *May* came a *Moth* expreſs'd at *c*, *d*.

The CATERPILLAR, *e*, was of a dark Red, and had a *Gibboſity* on its *Back* like the former. It was found on the *Black Thorn* the 3d of *September*, and the 8th of the ſame *Month* it ſpun it ſelf up in a Copper-colour'd *Web*; the *Moth*, *g*, *h*, came the 3d of *March*. I had others of them that did not come till the middle of *May*.

*To the Honorable Thomas Trevor Esqr.*

*This Plate is humbly dedicated by Eleaz.r Albin.*

E. Albin. delin.

Bulett Sculp.

TO THE R^T HONOURABLE

# George Booth Earl of Warrington

This Plate is humbly dedicated by Eleazar Albin.

albin delt. Hulett Sculpsit.

# *The* DESCRIPTION *of the Sixty Sixth* PLATE.

THIS *Maggot*, *a*, on the *Leaf*, was Green with a Stripe of White on its *Back*. It was found on the *Roſe Tree* feeding on ſmall *Inſects* which live in the Froth that is found on that and divers other Plants; its way of feeding is thus, it having no *Feet* it faſtens it ſelf to the *Leaf* by the *Tail*, which is broad and flat like that of a *Leach*, and ſeizes its Prey with its *Proboſces*, then lifting up its *Head* ſucks them till there is nothing left but their Skins. It changed into *Chryſalis*, *c*, the 22d of *June*, and the *Fly*, *d*, came the 10th of *July*. The *Fly* of theſe *Maggots* ſeems to be apprehenſive of the Want of *Feet* in the young *Embryo*, and lays her *Eggs* near the Place where the *Flies* are thickeſt on the *Plants*.

# *The* DESCRIPTION *of the Sixty Seventh* PLATE.

THE CATERPILLAR, *a*, in this *Table* was Green. It was found on the *Roſe-Bay Willow Herb* the 30th of *July*, and the 4th of *Auguſt* it went into the *Ground* and changed into a *Chryſalis*, *b*, and the 16th of *January* came the *Moth*, *c*, *d*; from one of theſe CATERPILLARS came the *Ichneumon*, *f*.

The CATERPILLARS at *g*, were Orange Colour, their *Heads* black with a Spot of the ſame on the firſt *Joint*. I believe them to be of the *Ichneumon* Kind having more *Holders* than the common CATERPILLARS. I found them the 10th of *June* on a *White-thorn* near *Peckham*; they eat in their *Web*, ſpinning it further as they want Food. They went into the *Ground* the 20th of the ſame *Month*, but could not be hatched with all the Care I could take. I found ſome of the ſame 2 Years after on a *Pear Tree*, and tryed to preſerve them by putting them in a *Bottle* in a hole in the *Ground* to keep them moiſt, but a Flood of *Water* coming drowned all my Hopes.

To John Henric: Linck at Leipsick Apothecary & Reg: Societ: Socius
This Plate is humbly dedicated by Eleazar Albin.

E. Albin del.

Bulett Sculp.

*To D^r Richard Richardson of North-Bierley, near Bradford, Yorkshire.*
*This Plate is humbly dedicated by Eleaz.^r Albin.*

# *The* DESCRIPTION *of the Sixty Eighth* PLATE.

THE CATERPILLAR, *a*, in this *Table* was of a dark Colour, the *Head* red. It was taken on the *Sallow* near *Hornſey Wood* about the middle of *May*, and on the 26th of the ſame *Month* it went into the *Ground* and changed into a *Chryſalis*, *b*, the *Moth* came the 13th of *September*, the *upper Wings*, *c*, Yellow, the *under Wings* and *under Side*, *d*, of a pale Cream Colour.

The CATERPILLAR, *e*, was Green and ſpotted with Red; I could not perceive it had any *Feet*; the *Belly* ſeemed wet or ſlimy like that of a *Snail*, it crept on the *Leaves* after the ſame manner. It was taken on the 2d of *September* on the *Oak*, and fed till the 20th; it then ſpun up in the *Leaves*, and the 29th of *May* came the *Moth* expreſſed at *f*, *g*, in the *Table*.

# *The* DESCRIPTION *of the Sixty Ninth* PLATE.

THE two CATERPILLARS in this *Table* are of one Species though differently marked; the firſt, at *a*, was Green ſpotted with Red. It was found on the *Oak* the 5th of *October*. The other, at *b*, was Green with a red Protuberance on its *Tail*. It was found on the *Maple* near *Highgate* the 20th of *September*; when it ſtood ſtill, it always lifted up its *hinder Part*. They went into the *Ground* at the End of *October*, and about the latter End of *February* came the *Moth* expreſt at *d*, *e*.

TO THE R.T HONORABLE —

John Lord Percevale

this Plate is humbly dedicated by Eleazar Albin.

*To. Mrs. Elizabeth Bridges of Soho Square*
*This Plate is humbly dedicated by Eleazr. Albin*

# *The* DESCRIPTION *of the Seventieth* PLATE.

THE black CATERPILLARS of this *Table*, at *a*, fed in a *Web* together on *Black Thorn*, *White Thorn*, and *Plumb Tree*. They were found at the latter end of *May* and changed into *Chryſalies* the beginning of *June*, and the 20th of the ſame *Month* came the *Moth*, *c*, *d*, commonly called the *Ermine*.

The CATERPILLAR, *e*, was brown on the *Back*, the *Belly* Aſh Colour parted from the Brown by an Orange-colour'd *Stripe*, its *Head* Black. It was found on the *Oak* the 26th of *May*: it ſpun up the 15th of *June* and changed into *Chryſalis*, the *Moth* came the 10th of *July*, *g*, *h*.

# *The* DESCRIPTION *of the Seventy Firſt* PLATE.

THE CATERPILLAR in this *Table*, at *a*, was Green ſtriped with White. It was found on the white *Archangel* in the Beginning of *July*, and about the middle of the ſame *Month* it ſpun it ſelf up in a tranſparent *Web*, and changed into a *Chryſalis*, *b*; the 20th of *Auguſt* came the *Moth*, *d*, the dark Shades of the *upper Wings* is browniſh, the light parts like burniſhed *Braſs*, the *under Wings* and *under Side* of a Hair Colour.

The ſmall *Maggot*, at *e*, was of a browniſh Colour full of *Briſtles*. It was taken in *Rabbet*'s *dung* in the middle of *October*, and at the end of the ſame *Month* it changed, the *Briſtles* remaining on the *Chryſalis*, *f*, and in the middle of *March* came the ſmall *Houſe-fly*, *g*.

TO THE MOST NOBLE
James Duke of Chandois
This Plate is humbly dedicated by Eleaz.r Albin.

To Mrs Rachel Schutz Wife of the Hon: Col. John Schutz

This Plate is humbly dedicated by Eleazr. Albin.

# *The* DESCRIPTION *of the Seventy Second* PLATE.

THE CATERPILLAR, *a*, in this *Table* was of a light Brown ſpotted with Black and White. It was found feeding on the *ſweet Williams* in a Garden near *Hackney*, on the 4th of *May*, and the 10th of the ſame *Month* it went into the *Ground* and changed into *Chryſalis*, *b*, and the 10th of *June* came the *Moth* commonly called the yellow *under Wing*, *c*, *d*. See *Liſter on Godart*, *page* 52. *N°* 41.

The CATERPILLAR, *e*, in this *Table* was Green, and ſpotted with Black. It was found folded up in the *Leaves* of the *Oak* the 24th of *May*, and the 27th of the ſame *Month* it ſpun it ſelf up and changed into a *Chryſalis*, *f*; the *Moth*, *g*, *h*, came the 18th of *June*. It was of a beautiful green Colour. From ſome of theſe CATERPILLARS came the *Ichneumon* figured at *i*, in the *Table*.

# *The* DESCRIPTION *of the Seventy Third* PLATE.

THE CATERPILLAR, *a*, in this *Table* was of a light Green. It was found folded up in the *Leaves* of the great *Nettle* at the end of *May*, it fed after the ſame manner of the CATERPILLARS in *Table* 37. It changed into a *Chryſalis*, *b*, in the Beginning of *June*, and in fourteen Days came a beautiful *Moth*, *c*, *d*.

The *Head* and *Back* of the CATERPILLAR, *e*, was of a pale Roſe Colour, the *Belly* Green. It was found folded up in the *Woodbine Leaves* near *Hornſey-wood* on the 22d of *May*. It was one of the nimbleſt CATERPILLARS I ever met with, for if you touch'd it never ſo little, it would leap about like a mad thing; It ſpun up the Day after it was taken, and changed into a *Chryſalis*, at *f*, and the *Moth* *g*, *h* came the 14th of *June*.

*To Brook Bridges Esq.r*

*This Plate is humbly dedicated by Eleaz.r Albin*

Al Rev.mo Pre. Don Bruno Tozzi
Procuratore generale della Congregatione di Valombrosa
Reg: Societ: Socio.

# *The* DESCRIPTION *of the Seventy Fourth* PLATE.

THE CATERPILLARS, *a*, *b*, were differing in Colour, ſome Brown and Green, others Red and Green. They were found on the *wild Roſe* the 20th of *May* near *Hornſey-wood*, I had four of them in a *Box*, and looking on them half an Hour after they were put in, found but two; and obſerving them more ſtrictly ſaw one of them devour the other in a ſmall ſpace of Time: that which remain'd went into the *Earth* in the *Box*, and changed into *Chryſalis*, *c*, and the 21ſt of *February* came a browniſh *Moth*, *d*, *e*.

The CATERPILLAR, *f*, is Brown. It was found on the *Oak* the 2d of *September*, and towards the latter End of the ſame *Month* it changed into *Chryſalis*, *g*, and the 13th of *April* came the *Moth*, *h*, *i*.

# *The* DESCRIPTION *of the Seventy Fifth* PLATE.

THE CATERPILLAR, *a*, in this *Table* was of a yellowiſh Green, the *Head* blueiſh. It was found feeding on the *Oak*; (I have likewiſe found of them on the *Haſle*; and on the *Lime-trees* in *St. James's Park*.) It went into the *Ground* the 19th of *June* and changed into *Chryſalis*, *b*; and the 10th of *February* came the *Moth*, *c*, *d*.

The CATERPILLAR, *e*, was of a pale Green. It was found feeding on the *Female Fern* the 2d of *September* by the *Wood* Side near *Charlton* in *Kent*, and the 13th of the ſame *Month* it went into the *Ground* and changed to a *Chryſalis*, *f*; and about the latter End of *April* came the *Moth*, *g*, *h*.

*To William Le Grand of Maiden Early in ye County of Berks Esqr.*
*This Plate is humbly dedicated by Eleazr. Albin.*

*To the Hon.ble Brigadier John Langston,*
*this Plate is humbly dedicated by Eleazar Albin.*

# *The* DESCRIPTION *of the Seventy Sixth* PLATE.

THE CATERPILLAR, *a*, in this *Table* was of a pale Green. It was found feeding on the *Briar* or *wild Roſe Tree* the 16th of *June*; and the 7th of *July* it went into the *Ground* and changed into *Chryſalis*, *b*, the 16th of *March* came the *Moth*, *c*, *d*.

The CATERPILLAR, *e*, was Green on the *Back*, and yellowiſh on the *Belly*. It was found on the *white Thorn* the 10th of *June* near the *boarded River*, and the 19th of the ſame *Month* it went into the *Earth* and changed into *Chryſalis*, *f*; and the 13th of *February* came the *Moth*, *g*, *h*.

# *The* DESCRIPTION *of the Seventy Seventh* PLATE.

THE Green CATERPILLAR, *a*, on the *Nettle*, was found at the Beginning of *Auguſt*, and on the 24th of the ſame *Month* it went into the *Earth* and changed into a *Chryſalis*, *b*, and the Beginning of *May* came the *Moth*, *c*, *d*.

The yellowiſh CATERPILLAR was found feeding on the *Jacea nigra or Knap-weed* the 11th of *September*, and the 16th of the ſame *Month* it went into the *Earth* and changed into a *Chryſalis*, and produced a *Moth* like the the former, the *Body* and *upper Wings* very dark with a Spot of White in each, the *under Wings* and *under Side* of a Hair Colour.

*To Mountague Gerrard Drake Esq.*

*This Plate is humbly Dedicated by* Eleazar Albin.

H. Tompson Sculp. et Lineav.

To John Ward of St. Clements Danes London, Esq.r
This Plate is humbly dedicated by Eleaz.r Albin.

H

# *The* DESCRIPTION *of the Seventy Eighth* PLATE.

THE CATERPILLAR, *a*, was Black on the *Back*, the *Head* and *Belly* of a muddy Green parted from the Black by a yellow *Stripe* on each Side, the Spots repreſenting *Eyes* reddiſh. It was found feeding on the *African Marygold* at the Beginning of *September*, and the latter End of the ſame *Month* it went into the *Earth* and changed into a *Chryſalis*, *b*, and the *Moth c*, *d*, came the 23d of *May* following.

# *The* DESCRIPTION *of the Seventy Ninth* PLATE.

THE CATERPILLAR, *a*, in this *Table* was Yellowiſh with dark Clouds. It was found feeding on the Garden *Creſſes* the 2d of *Auguſt*, and the 11th of the ſame *Month* it went into the *Ground* and changed into *Chryſalis*, *b*; the *Moth*, *c*, *d*, came the 14th of *May*.

The Green CATERPILLAR, *e*, was found feeding on *Mint* the 4th of *Auguſt*, (they feed alſo on *Burdock*, *Colts-foot* and *Parſley*;) the two *Holders* in the *middle* of the *Body* on each *Side* of this CATERPILLAR are very remarkable, in which it differs from all that I have yet obſerved. It ſpun up within two Days after it was taken, and on the 24th of the ſame *Month* came the *Moth*, *g*, *h*, commonly call'd the Y *Moth*, from having a Mark in the middle of each *upper Wing* ſomewhat reſembling that Letter. See *Liſter on Goddart page* 20. *N°* 14.

*To Thomas Windham of Hawkchurch in the County of Dorset*

*this plate is humbly Dedicated by* Eleazar Albin.

H. Terryson. Sculp. London

TO THE MOST NOBLE

Henrietta Dutchess of Newcastle,

This Plate is humbly dedicated by Eleazar Albin.

# *The* DESCRIPTION *of the Eightieth* PLATE.

THE CATERPILLAR, *a*, was Browniſh, having a Protuberance on the *middle* of his *Back* and another on his *Tail*, with a Shade of Red under the former. I found it on the *Willow*, by the *Thames-ſide* at *Chelſea Phyſick-garden* the 12th of *June*, and the 17th it ſpun it ſelf up between the *Leaves* in a thin *Web*; and changed into *Chryſalis*, *b*, which was all over cover'd with a blueiſh White ſomewhat like that on *Plumbs*; the *Moth*, *c*, *d*, came the 17th of *July*, it is commonly called the red *under Wing*.

# *The* DESCRIPTION *of the Eighty First* PLATE.

THE CATERPILLAR, *a*, in this *Table* was of a reddiſh Brown or Fox Colour, with a black *Stripe* like Velvet at each *Joint*; the *Head*, *Feet*, *Belly* and *Holders* were Black. I found it about the Beginning of *March*, and fed it on the *Bramble* till the latter end of the ſame *Month*, then it ſpun a *Web* in which it turn'd into *Chryſalis*, *b*; the Beginning of *May* came the *Moth*, *c*, *d*; this CATERPILLAR, is called by the *Country People* the *Devil's Gold Ring*, but we diſtinguiſh it by the Name of the *Fox*.

This CATERPILLAR is frequently found in *Autumn*, and reſemble the *Ragweed* CATERPILLAR, *e*, *Table* 34. when they are ſmall, but theſe I could never bring to their Change.

To the Right Honorable

*Thomas Earl of Pembroke, & Montgomery, &c.*

*this Plate is humbly Dedicated by* Eleazar Albin

H. Terasson, Sculp. Lond.

*To William Cholwich of the Middle Temple Esq.r*

*This Plate is humbly dedicated by Eleaz.r Albin.*

# *The* DESCRIPTION *of the Eighty Second* PLATE.

THE CATERPILLAR, *a*, in this *Table* was of a yellowiſh Colour with a Brown *Head*. It was found about the Beginning of *May* feeding on *Graſs*. Mr. *Knowlton* has obſerved them in *Hartfordſhire* to have devoured whole Fields of *Saint-foin*. It ſpun it ſelf up in a yellowiſh ſhining *Caſe*, and changed into a black *Chryſalis* the 24th of *May*, the *Moth*, *c*, *d*, came the 15th of *June*, the *upper Wings* of a dark Green ſpotted with Red, the *under Wings* all Red edged with Black: this is commonly called the *Wood Leopard*.

The CATERPILLAR, *e*, was found on an *Oak* near *Peckham* in *Kent* the 16th of *June*, a few Days after it caſt a *Skin*, and then fed again for ſome time afterward; it ſpun its ſelf up in a thick Oval *Caſe*, in which it died without Changing.

# *The* DESCRIPTION *of the Eighty Third* PLATE.

THE CATERPILLAR, *a*, in this *Table* was Yellow with *Tufts* of Scarlet and Yellow. It was found feeding on the *Sycamore Tree* at the Beginning of *July*; when you diſturb it, it rolls it ſelf up like a *Hedgehog*, as is expreſt on the *Leaf*; the 13th of *July* it ſpun it ſelf up mixing its *Hair* with the *Web*, and changed into a *Chryſalis*, and the *Moth* came the 10th of *June*. From ſome of theſe CATERPILLARS that were *fly-blow'd* about three Weeks after they ſpun up came *Ichneumon Flies*.

To the Right Honorable
*Lady Mary Gore.*
*this plate is humbly Dedicated by* Eleazar Albin.

*H. Fuzylton. Sculp. London.*

To the Hon.ble Brigadier Gen.l Russel.

this Plate is humbly dedicated by — Eleazar Albin.

E. Albin del.

Harlew Sculp.t

# *The* DESCRIPTION *of the Eighty Fourth* PLATE.

THE CATERPILLAR, *a*, was Purple, beautifully marked with Red and Yellow Spots. It was found on the *Willow* the 15th of *May*, and the 4th of *June* it ſpun up between the *Leaves* and changed into a hairy *Chryſalis*; the *Moth*, *d*, *e*, came the 24th of the ſame *Month*, they lay *Eggs* of a pale Green Colour covered with a Subſtance looking like Leaf Silver. The young CATERPILLARS were hatched the 28th and 29th of *July*, and live all Winter. See *Liſter on Godart*, *page* 84. *N°* 87.

The Green CATERPILLAR, *e*, was taken the 4th of *Auguſt* thinly ſpun up in the *Leaves* of the great *Water-graſs* in a *Meadow* near *Rotherhith*; in about two Days after it changed into a *Chryſalis*, *f*, and the 17th of the ſame *Month* came a browniſh *Moth*, *g*, *h*, with Spots like *burniſh'd Gold* in the *upper Wings*.

# *The* DESCRIPTION *of the Eighty Fifth* PLATE.

THE CATERPILLARS, *a, a,* were found on the *Haſle* the 1ſt of *June*. I obſerv'd them to eat very little, but upon giving them freſh *Boughs* which happened to be wet with *Rain,* they fed greedily. The next day I gave them *Water* and *Honey* mixed together, of which they drank a good Quantity and fell to eating again very heartily. In this manner, I fed them every day ſometimes twice a-day till the 14th of the ſame *Month*; they then went into the *Earth* and changed into *Chryſalis*; the *Moth* came at the latter End of *December*; *b, c,* ſhows the *Female,* and *d, e,* the *Male.*

TO THE MOST NOBLE

# William Duke of Devonshire

This Plate is humbly dedicated by Eleaz.r Albin.

N. S.

TO THE RIGHT HONORABLE
*Lady Elizabeth Compton*
*this plate is humbly Dedicated by* Eleazar Albin.

H. Ferguson, Sculp. London,

# *The* DESCRIPTION *of the Eighty Sixth* PLATE.

THE CATERPILLAR, *a*, upon the upper *Branch* was finely painted with divers Colours having a *Protuberance* on the *Back*. It was found on the *Cherry Tree* the 15th of *June*, and on the 20th it went into the *Earth* and changed into a *Chryſalis*, *b*; the 14th of *July* came the *Moth*, *c*, *d*.

The CATERPILLAR on the lower *Branch* was painted like the former having two *Protuberances*, one on the *Back* and another on the *Tail*. This was found on the *Plumb Tree* about the latter end of *July*, and a *Moth* like the former came the 26th of *May* following. Their *Eggs* are very ſmall, and of the Colour of *Vardegreaſe*.

# *The* DESCRIPTION *of the Eighty Seventh* PLATE.

THE CATERPILLAR, *a*, was Brown, with two Red Spots near the *Tail*, and a Row of white Spots on each *Side*. It was found on the *white Thorn* the 28th of *May*; and the 10th of *June* it ſpun up, and about the middle of *July* came a white *Moth*, *c*, *d*, with a brown *Tail*, from whence it is commonly called the *Brown-tail*. The *Eggs* of this CATERPILLAR are hatched in *Autumn*, and the Young feed upon the fleſhy Part of the *Leaf*, leaving the *upper Skin* untouched; they lay themſelves up in *Webs* all Winter, and as ſoon as the *Buds* open, they come forth and devour them in ſuch manner that whole Trees and ſometimes Hedges for a great way together are abſolutely bare. It will be well worth while for thoſe who value their Trees, or Hedges, to have the *Webs* cut off and deſtroyed during the Winter.

The CATERPILLAR, *e*, was dark Brown, ſpotted all over with Red and White. It was found on the *white Thorn* the 29th of *May*, and the 2d of *June* it ſpun it ſelf up, and changed into a *Chryſalis*; the 22d of *June* came a white *Moth* with a ſmall black Spot in each *upper Wing*, the End of their *Tail* Orange Colour. They lay *Eggs* of a pale Colour, covering them with a woolly Subſtance; the young CATERPILLARS hatched the 14th of *Auguſt*; I fed them 'till the latter End of *October*; they ſpun themſelves up in little *Caſes*, and ſo remained till the *Spring* following.

*To Thomas Conslad Esqr*

*this plate is humbly Dedicated by* Eleazar Albin.

H. Fenton Sculp. London

*T. Th.: Knowlton Gardiner at Sr. Henry Penrisces, at Offley Place in Hartford Shire*

*This Plate is humbly dedicated by Eleaz.r Albin*

# *The* DESCRIPTION *of the Eighty Eighth* PLATE.

THE CATERPILLAR, *a*, was Yellow and Orange Colour. It was taken on the *Aſpen Tree* near *Muſſel* Hill at the Beginning of *September*; it ſpun it ſelf up in a *Web* in which it lay two days, and then came out caſting its *Skin*, the Marks and Colour appear'd as at *b*; it fed 'till the 24th of *September*, and then ſpun it ſelf up to the Side of the *Box*; the *Moth*, *d*, *e*, came the 19th of *March*.

The CATERPILLAR, *f*, was dark Brown, ſpotted with divers Colours. It was found on the *white Thorn* the 16th of *May* (they will feed on the *Oak*, *Haſle*, and *black Thorn*;) it ſpun up the the 28th of *May*, and changed into *Chryſalis*, *g*, and the 20th of *Auguſt* came the *Moth*, *h*, *i*. Their *Eggs* are covered with a dark hairy Subſtance which they lay in *Lines* of divers Figures on the *Barks* of the Trees.

# *The* DESCRIPTION *of the Eighty Ninth* PLATE.

THE CATERPILLAR, *a*, in the *Table* was purpliſh ſpotted with Red, it had four *Tufts* of yellow *Hair* on its *Back*, two black *Tufts* like *Horns* on the *Head*, and one of the ſame Colour on the *Tail*. It was found feeding on the *Apricock Tree* the 27th of *May*, and ſpun it ſelf up at the Beginning of *June*; the *Female Moth*, *c*, came about the 16th of the ſame *Month*, this was without *Wings*, and after Copulation lays her *Eggs* on the *Web*, in which ſhe lay while in *Chryſalis*; the *Male*, *d*, *e*, of a reddiſh Brown, with a Spot of White in each *upper Wing*, came the 21ſt of *June*. From a *Chryſalis* of this kind came the *Ichneumon*, *f*. See *Liſter on Godart*, *page* 80. *N°* 79.

*To Mrs Etheldred Howel Wife of the Most Revend Father in God*
*His Grace the Lord Elect Bishop of Canterbury.*
*this Plate is humbly dedicated by* Eleazar Albin.

*To Mrs Dorothea Trotman Wife of Samuel Trotman of Bucknel Esq.r*

*this Plate is humbly dedicated by* Eleazar Albin.

# *The* DESCRIPTION *of the Ninetieth* PLATE.

THE CATERPILLAR, *a*, was darkiſh Purple with red Spots and horned *Tufts* like the former, the four *Tufts* on its *Back* Red. It was found feeding on the *Haſle* at the latter End of *April* near *Lewſham* in *Kent*; it fed 'till the 19th of *May*, and then ſpun up and changed into a *Chryſalis*; and the *Moth* came the 6th of *June*; *c*, *d*, ſhows the *Male*, and *b*, the *Female*.

The CATERPILLAR, *e*, was Orange Colour, with two *Tufts* on the *Head*, and one on the *Tail*, and but two in the middle of the *Back* of the ſame Colour of the CATERPILLAR. It was found on the *Haſle* the 19th of *Auguſt*, and the 10th of *September* it ſpun up, and changed into *Chryſalis*, *f*; the *Moth*, *g*, *h*, came the firſt of *April*.

# *The* DESCRIPTION *of the Ninety First* PLATE.

THE CATERPILLAR, *a*, in this *Table* was of a yellowiſh Green, with an indented Line of Brown on each *Side*. It was found feeding on the *wild Briar* at the Beginning of *September*, and at the latter end of the ſame *Month* it went into the *Earth*, and changed into *Chryſalis*, *b*; the *Moth*, *c*, *d*, came at the latter end of *May*. It was White motled with Black.

The CATERPILLAR, *e*, was Brown, and round each *Joynt Tufts* of ſhort prickly *Hairs*, the *Head* Red. It was found on the *white Thorn* about the 20th of *May* near *Hornſey-wood*, and about the Beginning of *June* it went into the *Earth*, and changed into *Chryſalis*, *f*; the *Female Moth*, *g*, was without *Wings*, and came about the middle of *April*; and the *Male*, *h*, *i*, came two Days after.

*To Elizabeth Lady Stuart, Wife of S.r Simeon Stuart of Hantshire, Bar.t*

*This Plate is humbly dedicated by Eleaz.r Albin*

*To Henry Cartwright Esq.r*

*This Plate is humbly dedicated by Eleaz.r Albin.*

# *The* DESCRIPTION *of the Ninety Second* PLATE.

THE CATERPILLAR in this *Table*, while ſmall, was of a Roſie-red Colour, with a Circle of white Spots round each *Joint*, as repreſented by the leſſer Figure in the *Plate*, when it grew larger, upon caſting a *Skin*; it appear'd as at *a*. It was found on the *Dog-berry Tree* near *Muzzle-hill* the 26th of *Auguſt*; it went into the *Ground* the 3d of *October*, and changed into *Chryſalis*, *b*; and the *Moth*, *c*, *d*, came about the latter end of *May* following.

The CATERPILLAR, *e*, was Green, with ſmall red Lines on the *Back*. It was found on the *Sallow* at the Beginning of *September* near *Hornſey*; it ſpun it ſelf up the 14th of the ſame *Month*, and changed into *Chryſalis*; the 23d of *April* came the *Moth*, *g*, *h*.

# *The* DESCRIPTION *of the Ninety Third* PLATE.

THE CATERPILLAR, *a*, in this *Table* was found feeding on the *Oak* near *Hampſtead Heath* on the 27th of *May*; it ſpun it ſelf up in the *Leaves* at the bottom of the *Box*, and changed into *Chryſalis*, *b*, and the *Moth* came the 19th of *June*.

The CATERPILLAR, *a*, was taken on the *Oak* the 7th of *September*, and on the 18th of the ſame *Month* it ſpun its ſelf up, and changed into a *Chryſalis*, *f*; the 16th of *May* came the *Moth*, *g*, *h*.

*To Mrs. Mary Reade 2d Daughter of Sr. Ja.s Reade of Brocketshall. Bar.t this Plate is humbly dedicated by* Eleazar Albin.

To Thomas Frankland Esq^r
This Plate is humbly dedicated by Eleaz^r. Albin.

# *The* DESCRIPTION *of the Ninety Fourth* PLATE.

THE CATERPILLAR, *a*, was Aſh Colour, with Lines of White. It was found feeding on *Bramble Leaves* the 10th of *September* near *Highgate*. It fed all the *Winter* till the 5th of *March*, and then ſpun ſome of the *Leaves* together like a *Bag* which it hung by four or five threds, ſo that upon touching it ſwung to and fro; in which it changed into a *Chryſalis*, *c*; the *Moth*, *d*, *e*, came the 21ſt of *April*.

The CATERPILLAR, *b*, was of the ſame Kind, tho' differing in Colour; and changed about the ſame Time, and in all other Reſpects was as the former. See *Liſter on Godart*, *page* 14. *N°* 10.

# *The* DESCRIPTION *of the Ninety Fifth* PLATE.

THE CATERPILLAR, *a*, in the *Table* was found on the *white Thorn* the 13th of *September*; it ſpun it ſelf up on the 24th of the ſame *Month*, and changed into *Chryſalis*, *b*; the *Moth*, *c*, *d*, came about the middle of *May*, it was the ſame with *g*, *h*, in the 42d *Table*. I found ſeveral of theſe CATERPILLARS which varied very much in Colour, ſome being much lighter, and ſome darker; but they all had *Protuberances* on their *Backs*.

The CATERPILLAR, *e*, was found on the *white Thorn* the 15th of *September*, it was of a greeniſh Colour; and the 17th of the ſame *Month* it ſpun up in the *Leaves*, and changed into *Chryſalis*, *f*, and the 3d of *April* came a yellow *Moth*, *g*, *h*, with brown Clouds towards the *Pinions* of the *upper Wings*.

To Mrs Elizabeth Gorges Wife of John Codrington of Codrington Esqr.
this plate is humbly Dedicated by Eleazar Albin.

E. Albin del.

H. Fourdrinier Sculp. London.

To M.rs Eliz.: Edgley Hewer eldest daughter of S.r Simeon Stuart of Hantshire Bar.t
This Plate is humbly dedicated by Eleaz.r Albin

# *The* DESCRIPTION *of the Ninety Sixth* PLATE.

THE CATERPILLAR, *a*, in this *Table*, was found feeding on the *Haſle* the 14th of *September* near *Cain Wood*; and the 15th of *October* it ſpun it ſelf up in one of the *Leaves*, and changed into a *Chryſalis*; the *ſcallopt-wing'd Moth*, *b*, *c*, came the 19th of *April*.

The CATERPILLAR, *d*, was a of dark Red Colour, and had three *Protuberances* on its *Back* near the *Tail*. It was found on the *black Thorn* near *Bowes-farm* the 9th of *Auguſt*, and ſpun it ſelf up between the *Leaves* and the *Box* the 7th of *September*; the *Moth*, *e*, *f*, came the 20th of *March* following.

# *The* DESCRIPTION *of the Ninety Seventh* PLATE.

THE CATERPILLAR, *a*, was a Kind of *Looper*, it was hairy, (which is not very common among them;) and beautifully marked with ſeveral Colours. It was found on the *Haſle* the 1ſt of *June*, and the 14th of the ſame *Month* it went into the *Ground*, and changed into a *Chryſalis*, *b*, and at the Beginning of *April* came the *Moth*, *c*, *d*.

The CATERPILLAR, *e*, was Aſh Colour. It was found on the *white Lady's-bedſtraw* in the *Marſhes* near *Rotherhith* the 3d of *September*; it ſpun it ſelf up the 12th of the ſame *Month*, and changed into *Chryſalis*, *f*; and the 20th of *February* came the *Moth*, *g*, *h*.

*To Mrs. Sarah Elizabeth Bridges of Soho Square*
*This Plate is humbly dedicated by Eleaz.r Albin*

*To Edward Jackson of the Middle Temple Esq^r.*
*This Plate is humbly dedicated by Eleazar Albin*

# *The* DESCRIPTION *of the Ninety Eighth* PLATE.

THE Greeniſh CATERPILLAR, *a*, was found feeding on the *black Thorn* near *Highgate* the 4th of *September*, and the 6th of *October* it ſpun it ſelf up in the *Leaves*, and changed into *Chryſalis*, *b*; and the 23d of *March* came the *Moth*, *c*, *d*, the *upper Wings* Yellow and White, with three dark Clouds a-croſs them, the *under Wings* and *under Side* of a light Hair Colour.

The CATERPILLAR, *e*, was of browniſh Red, with a line of White on each *Side*, and a Streak of the ſame at each *Joint* croſs the *Back*. It was found on the *Fern* the 13th of *September* in *Biſhop's-wood*; it ſpun up the 16th of the ſame *Month*, and changed into *Chryſalis f*; the *Moth*, *g*, *h*, came the 12th of *May*.

# *The* DESCRIPTION *of the Ninety Ninth* PLATE.

THE CATERPILLAR at, *a*, was greenish Yellow, ſpotted with Red on the *Back*. It was found on the *Haſle* about the middle of *September*, and ſpun it ſelf up about the 20th of the ſame *Month*, and changed into *Chryſalis b*; the *Moth*, *c*, *d*, came about the middle of *May* following.

The CATERPILLAR, *e*, was pale Green, clouded and ſpotted with Brown. It was found feeding on the *Horſe-radiſh* the 18th of *September*, and the 23d of the ſame *Month* it went into the *Ground*, and changed into *Chryſalis*; the *Moth*, *g*, *h*, came the 9th of *May*.

*To William Gibbons M.D.*

*This Plate is humbly dedicated by Eleaz.r Albin.*

To Arthur Weavor of the Middle Temple Esq^r

This Plate is humbly dedicated by Eleaz^r. Albin

# *The* DESCRIPTION *of the Hundredth* PLATE.

THE CATERPILLAR, *a*, in this *Table* was light Brown, ſpotted with Red; it had two red *Protuberances* at the end of its *Tail*. It was found on the *black Thorn* the 10th of *May*, and the 25th of the ſame *Month* it went into the *Earth* and changed into *Chryſalis*, *b*; and the latter end of *September* came the *Moth*, *c*, *d*.

The CATERPILLAR, *e*, was Brown and ſpotted with Yellow. It was found on the *black Thorn* the 18th of *May*, and the 26th of the ſame *Month* it went into the *Earth* and changed into *Chryſalis*, *f*; and the 6th of *November* came the *Moth*, *g*, *h*, the *Female* of which is without *Wings*, and lays her *Eggs* near the Place where ſhe lay while in *Chryſalis*.